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April 21, 1989

Mr. Dee Williamson
U. S. Department of Energy
Grand Junction Projects Office
P.O. Box 2567
Grand Junction, Colorado 81502

SUBJECT: SUBMITTAL OF THE DETAILED ANALYSIS OF FEDERAL AND STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARs) FOR THE MONTICELLO REMEDIAL ACTION PROJECT

Dear Mr. Williamson:

Attached for your April 24 submission to EPA and the State of Utah is the detailed analysis of Federal and State of Utah Potentially Applicable or Relevant and Appropriate Requirements (ARARs) as specified in Section IX (H) of the Monticello Federal Facility Agreement. The analysis includes the selection of potential ARARs from the original list submitted to DOE/GJPO by the State of Utah on March 20, 1989. Utah's original submittal of proposed ARARs is included as Appendix A.

Review comments from Debbie Berquist, DOE-ID; John H. Barry, DOE-ID; and Richard Nace, Weston-OTS; have been addressed in this document.

Should you have any questions regarding the submitted information, please contact either myself at extension 6355 or Tracy B. Plessinger at extension 6197.

Sincerely,

Brian W. Mathis,
Program Manager

TP:mt

Attachment

ANALYSIS OF
FEDERAL AND STATE APPLICABLE OR RELEVANT AND APPROPRIATE REGULATIONS (ARARs)
FOR THE INACTIVE MILLSITE FACILITY, MONTICELLO, UTAH

1.0 Background

Section 121 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, requires that the following be considered when selecting a remedial action at a CERCLA/SARA site:

> "Such remedial actions shall be relevant and appropriate under circumstances presented by the release or threatened release of such substance, pollutant, or contaminant...with respect to any hazardous substance, pollutant or contaminant that will remain on site, if--
>
> > "(i) any standard, requirement, criteria, or limitation under any Federal environmental law, including but not limited to, the Toxic Substances Control Act, the Safe Drinking Water Act, the Clean Air Act, the Clean Water Act, the Marine Protection, Research, and Sanctuaries Act, or the Solid Waste Disposal Act; or
> >
> > "(ii) any promulgated standard, requirement, criteria, or limitation under a State environmental or facility siting law that is more stringent than any Federal standard, requirement, criteria, or limitation, including each such State standard, requirement, criteria, or limitation contained in a program approved, authorized or delegated by the Administrator under a statute cited in subparagraph (A), and that has been identified to the President by the State in a timely manner,
>
> "is legally applicable to the hazardous substance or pollutant or contaminant concerned or is relevant and appropriate under the circumstances of the release or threatened release of such hazardous substance or pollutant or contaminant, the remedial action selected under section 104 or secured under section 106 shall require, at the completion of the remedial action, a level or standard of control for such hazardous substance or pollutant or contaminant which at least attains such legally applicable or relevant and appropriate standard, requirement, criteria, or limitation." (Section 121 [d][2][A])

Procedures for identifying and evaluating federal ARARs are listed in the U.S. Environmental Protection Agency's draft guidance, *CERCLA Compliance with Other Laws Manual*, August 8, 1988, Office of Emergency and Remedial Response, Washington, D.C. 20460, OSWER Directive 9234.1-01. Guidance for identifying and analyzing ARARs is also provided at 40 CFR Part 300, specifically the proposed rule of December 21, 1988, FR 51394.

Environmental Protection Agency (EPA) guidance defines categories of ARARs. A requirement may be either "applicable" or "relevant and appropriate," but not both. An "applicable" requirement is any cleanup standard, standard of control, or other substantive environmental protection standard promulgated under federal or state law that specifically addresses a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site. For a requirement to be "applicable," all of the jurisdictional prerequisites of that requirement must be satisfied with respect to the remedial action or site circumstances. A "relevant and appropriate" requirement is any promulgated federal or state environmental law that may not be "applicable" to a hazardous substance, remedial action, or location at a CERCLA site, but which nonetheless addresses site specific contaminants or circumstances sufficiently similar to those encountered at a CERCLA site so that its use is well suited to the particular site. The relevance and appropriateness of a requirement can be judged by comparing a number of factors--including the characteristics of the remedial action, the hazardous substances in question, and the physical circumstances of the site--with those addressed in the requirement. All or part of a law or act may be relevant and appropriate at a site.

Requirements, regulations, acts, and other provisions determined to be ARARs must be complied with unless they meet the waiver requirements under CERCLA/SARA Section 121(d)(4). The waiver requirements are listed below:

- Selection of Interim Remedy. The remedial action selected is only part of a total remedial action that will attain the ARAR level or standard of control when completed.

- Greater Risk to Human Health and Environment. Compliance with the ARAR at the site will result in greater risk to human health and the environment than the alternative selected.

- Technical Impracticability. Compliance with the requirement is technically impracticable from an engineering design perspective.

- Equivalent Standard of Performance Attained. The remedial action selected will attain a standard of performance that is equal to that required by the ARAR through use of another method or approach.

- Inconsistent Application of State Requirements. The State has not consistently applied (or demonstrated an intention to apply consistently) the ARAR in similar circumstances at other remedial actions.

- Fund Balancing. This waiver is for Superfund-financed cleanups only.

There are three types of ARARs: chemical-specific, location-specific, and action-specific. Chemical-specific ARARs set health- or risk-based concentration limits for particular hazardous substances or contaminants in air, soils, water, etc. Location-specific ARARs establish additional requirements on the basis of unique characteristics of a site that could be affected as a result of remedial action. Action-specific ARARs are technology-based restrictions which are determined by the remedial action alternatives considered.

If no ARAR exists for a contaminant, chemical, or circumstances surrounding the release of a hazardous chemical, or if existing ARARs do not ensure protection of human health and the environment, then federal and state criteria, advisories, guidance, and proposed rules may be considered. These are referred to as TBCs--to be considered. Although TBCs cannot be ARARs, they often will be considered along with ARARs in the site risk assessment and will be used in determining the necessary level of cleanup for protection of health or the environment.

2.0 ARARs Identification Methodology at the Monticello Site

As outlined in the Federal Facility Agreement (FFA) between EPA Region VIII, The State of Utah Department of Health, and the U.S. Department of Energy (DOE),

> "Within 30 days after the effective date of this Agreement, the State shall submit to the DOE and EPA a proposed list of State ARARs. DOE shall conduct a detailed ARARs analysis to establish cleanup standards at the Site, taking into account both Federal ARARs and State ARARs. DOE shall submit this ARARs analysis to EPA and the State within 60 days after the effective date of this agreement."

The final ARARs determination is made by the EPA in consultation with the State of Utah. It is understood that the identification of ARARs is an iterative process. Therefore, additional requirements may be identified, and requirements may be deleted as the list of potential ARARs is further refined by the State, EPA, and the DOE.

ARARs can be identified only on a site-specific basis. The suitability of an ARAR depends on site characteristics, specific elements and chemicals at the site, and particular actions anticipated as remedies. Because both on-site and off-site remediation alternatives are being considered at Monticello, this ARARs assessment considers the characteristics of the Monticello Millsite and, to the extent possible, the characteristics of potential off-site disposal sites.

The procedures for identification and analysis of the federal and state ARARs followed the five steps outlined in the EPA's *Compliance with Other Laws Manual*:

1. Identification of potential ARARs.

2. Determination of applicability of potential ARARs.

3. Determination of relevancy and appropriateness of potential ARARs.

4. Determination of protectiveness, criteria, guidance, advisories, and proposed standards from the risk assessment which are to be considered (TBCs).

5. Determination of circumstances which may be present that would justify a waiver of otherwise applicable or relevant and appropriate requirements.

The State of Utah submitted a proposed list of ARARs to the DOE on March 20, 1989. This original list is included as Appendix A; the analysis is found in Section 4.0.

3.0 Federal ARARs

In Tables 1 and 1A are summarized the federal requirements analyzed for potential ARARs for the Monticello site. Listed in the tables are potentially applicable or relevant and appropriate requirements for two remedial action alternatives being considered (not including the No Action alternative). The citations of the United States Constitution and regulations are provided in the tables for the identification of legal status.

3.1 Federal Facilities Agreement (FFA) Applicable or Relevant and Appropriate Legal Requirements

Legally applicable or relevant and appropriate requirements for the Monticello site may include:

1. The Atomic Energy Act, as amended.

2. The Uranium Mill Tailings Radiation Control Act of 1978, as amended.

3. Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, 40 CFR Part 192.

4. National Environmental Policy Act of 1969, as amended; The Council on Environmental Quality regulations, 40 CFR Part 1500; and DOE Guidelines (45 FR 20694, 45 FR 53199, 45 FR 78756, 47 FR 7976).

5. DOE Orders 5480.1A (Environmental Protection, Safety and Health Protection Program for DOE Operations); 5480.4 (Environmental Protection Standards, Safety and Health Protection Standards); 5440.1C (Implementation of NEPA).

6. Formerly Utilized Sites Remedial Action Program - Summary Protocol (Jan. 1986), as amended; and Surplus Facilities Management Program Plan (Oct. 1, 1985), as amended.

7. Federal Water Pollution Control Act, as amended by the Clean Water Act Amendments of 1986.

8. The Safe Drinking Water Act, as amended.

9. The National Historic Preservation Act of 1966, as amended; and the Archaeological Resources Protection Act of 1979.

(Reference: Monticello Site Federal Facility Agreement, December 1988).

3.2 Chemical-Specific Requirements

The principal contaminants/elements of concern during remedial action at the Monticello site are radioactive and nonradioactive substances associated with uranium and vanadium mill tailings. Monitoring has indicated that concentrations of uranium, vanadium, molybdenum, selenium, and arsenic in some wells on the site exceed values observed for these constituents in upgradient background wells. Other contaminants include direct-gamma radiation, radon, and radium-226. The contaminants of concern exhibit either carcinogenic or toxic effects in humans. The contaminant exposure pathways considered relevant to the Monticello site are direct exposure, inhalation, and ingestion.

The potential chemical-specific ARARs are evaluated in the following paragraphs.

Safe Drinking Water Act (SDWA)

The regulations for implementing the SDWA, as amended, contain criteria and procedures to assure a supply of drinking water which dependably complies with maximum contaminant levels. They include quality control and testing procedures to insure compliance with these levels and to insure proper operation and maintenance of the public potable water supply system. The regulations also specify the minimum quality of water that may be taken into the system and provide siting requirements for new facilities for public water systems.

The provisions of the SDWA at 40 CFR Part 141 and 143 were considered in this analysis as potential ARARs for the Monticello site because of the importance of protecting the shallow alluvial aquifer relative to public water systems. However, the drinking water standards are not ARARs for two primary reasons: (1) public water systems would not be affected by any of the proposed alternatives; and (2) the shallow ground-water aquifer at the site is not now used for drinking, nor is it likely to be used in the future as a public municipal source because of its small areal extent and yield.

Federal Water Pollution Control Act, As Amended By The Clean Water Act Of 1977 (CWA)

Water Quality Criteria

The water quality criteria of the CWA and the regulations at 40 CFR 131 were considered as potential ARARs because of the importance of assuring that the surface waters of Montezuma Creek are protected. The CWA provides criteria for states to set water quality standards on the basis of toxicity to aquatic organisms and human health. Evidence exists for the contamination of surface water in Montezuma Creek. The federal criteria are applicable; however, they can only be enforced by the State of Utah through their federally approved program under the CWA. Because the standards are state promulgated (see Table 5), the federal CWA Water Quality Criteria are not ARARs for the purposes of the federal ARARs.

Dredge or Fill Requirements (Section 404)

The provisions of 40 CFR 230 and 231 and 33 CFR Part 323 require permits for the discharge of dredged or fill material into navigable waters. Although permits would not be required for any alternatives anticipated for on-site remedial actions, discharge of dredged or fill material into navigable waters or onto wetlands may occur during remedial action along Montezuma Creek. Therefore, these substantive provisions are found to be applicable.

Clean Air Act

The purposes of this Act are to protect and enhance the quality of the nation's air resources so as to promote public health and welfare and the productive capacity of the nation's population. The Act also finds that the prevention and control of air pollution at its source is the primary responsibility of the states and local governments.

National Primary and Secondary Ambient Air Quality Standards (NAAQS)

40 CFR Part 50 establishes standards for ambient air quality to protect public health and welfare and includes standards for particulate matter and lead. These standards were found to be potentially applicable, but because they are implemented through the federally approved air quality program in the State of Utah they are not considered federal ARARs.

Resource Conservation and Recovery Act (RCRA)

The provisions for implementing this act are found at 40 CFR Parts 260 through 280. There are two general prerequisites for applicability of RCRA hazardous waste management regulations:

> (1) RCRA requirements for treatment, storage, or disposal of hazardous waste apply to a Superfund site if the site contains RCRA listed or characteristic hazardous waste that was treated or disposed of after the effective date of the RCRA regulations that are under consideration as potential ARARs for the site, or (2) if the CERCLA activity at the site constitutes current treatment, storage, or disposal of RCRA hazardous waste.

There is also an exclusion for source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 *et seq.*, at 40 CFR § 261.4(a)(4).

Characterization of the Monticello Millsite and history indicate that no RCRA listed or characteristic hazardous wastes were treated or disposed of at the site. No treatment, storage, or disposal of a RCRA hazardous waste is taking place or is anticipated to take place. Furthermore, EP Toxicity tests performed on millsite tailings at UMTRA sites indicate that uranium mill tailings similar to those at Monticello are not hazardous wastes as defined by RCRA. Therefore, the requirements of RCRA are neither applicable nor relevant and appropriate for the purposes of this analysis.

Atomic Energy Act (AEA), as amended, and the Energy Restoration Act

The provisions implementing the AEA at 10 CFR Part 40 address licensing requirements for the disposal of tailings or wastes from milling operations (source material extraction or concentration processes). They are not applicable to the specific disposal of mill tailings from the Monticello site but would be applicable to the remedial action alternative of off-site disposal of the mill tailings in a tailings impoundment in conjunction with a licensed NRC repository. The regulations would be neither applicable nor relevant and appropriate to the on-site disposal alternative.

Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA)

The regulations promulgated at 40 CFR Part 192, including those proposed regulations that would replace 40 CFR 192.20 (a)(2) and (3), were considered as potential ARARs for the Monticello Remedial Action Project. The UMTRCA regulations are not applicable because the site does not meet the statutory or jurisdictional prerequisites (i.e., the site is not one of the 24 inactive uranium mill tailings sites specifically identified in UMTRCA). However, the regulations are relevant and appropriate for the following reasons:

- The intent of Congress was to relate these standards to inactive uranium mill tailings sites. The Monticello site is an inactive uranium mill tailings site which is owned by the Federal Government.

- The regulations were promulgated to control tailings which were dispersed into the environment and pose a threat to human health and the environment. The inactive Monticello uranium mill tailings site is characterized by large above-surface and subsurface uranium process residue tailings piles which pose a danger to the public. Dispersion of contaminants into the environment through air, ground water, and surface water pathways has occurred.

- UMTRCA cleanup standards are relevant and appropriate to the Monticello site if off-site transport and disposal becomes the preferred alternative. UMTRCA is also relevant and appropriate to on-site disposal alternatives.

- The regulations at 40 CFR 192.21 and 192.22 allows for situations where numerical standards may be inappropriate and allows other standards (Supplemental Standards) to be used for remedial actions where the action would produce environmental harm in excess of the benefits. The Supplemental Standards could pertain to the proposed remedial action involving the cleanup portion of Lower Montezuma Creek, steep slopes, and the Monticello Cemetery.

- The numeric standards for health and environmental cleanup would be relevant and appropriate for corrective action as chemical-specific ARARs. Groundwater standards are presented in Table 2. Health and environmental protection standards are shown in Table 2A along with criteria for applying Supplemental Standards.

Although the standards apply only to certain specifically designated sites where uranium was processed, the standards are relevant and appropriate because uranium and vanadium were processed at the site, and it is the gross alpha, radium-226, radium-228, and metals content of uranium processing wastes that are regulated by these standards. UMTRCA would serve as a chemical-specific and action-specific ARAR.

Occupational Safety and Health Act (OSHA)

The regulations at 29 CFR Part 1900 regulate worker health and safety; the requirements of 40 CFR 300 of CERCLA dictate that OSHA standards apply to all response actions carried out under the provisions of the National Contingency Plan. In addition, OSHA requirements incorporate the radiation exposure limits of the Nuclear Regulatory Commission 10 CFR Part 20. This act is applicable for the purposes of all remedial actions and is therefore considered applicable as a federal ARAR.

3.3 Location-Specific Requirements

Location-specific ARARs are site specific and basically set restrictions on remedial action activities at particular alternative disposal sites. Location-specific ARARs can apply to remedial actions evaluated for a disposal site and may be used to restrict or preclude certain activities or remedial actions on the basis of location or characteristics of a site. Location-specific ARARs identified for the Monticello site are:

National Historic Preservation Act of 1966, as amended

The regulations implementing this act at 40 CFR 6.301(b) require federal agencies to take into account the effect of any federally assisted undertaking or licensing on a structure or object that is included on or is eligible for the National Register of Historic Places. These regulations are applicable to remedial activities which would take place in Montezuma Creek Canyon.

Archaeological and Historical Preservation Act of 1979

This act establishes procedures to provide for the preservation of historical and archaeological resources which may be destroyed through alteration of terrain as a result of a federal construction project or a federally licensed activity or program. The regulations implementing the Act apply to any disposal alternative or associated construction activity which would affect historical or archaeological resources. On the basis of recent archaeological surveys, the regulations are determined applicable to remedial activities which would take place in Montezuma Creek Canyon.

Fish and Wildlife Coordination Act

The provisions of this act require consultation with the U.S. Fish and Wildlife Service whenever a federal department or agency proposes or authorizes any modification of any stream or other water body and requires adequate provisions for the protection of fish and wildlife resources. The Montezuma Creek channel will be modified during .mb5

construction, but recent flora and fauna surveys show that there would be only temporary short-term losses of habitat for wildlife. No fish species were recorded. Therefore this requirement is applicable as a location-specific ARAR and needs to be addressed during the construction period of all alternatives.

Endangered Species Act

This act requires that federal agencies ensure that any action authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify critical habitat required for the continued existence of that species. Although no threatened or endangered species have been found at or near the Monticello site itself, these provisions are relevant and appropriate for any off-site disposal alternative.

3.4 Action-Specific Requirements

Action-specific ARARs are performance, design, or other similar requirements that control remedial activities or actions. These requirements are not affected by contaminants present but are driven by particular remedial activities or actions that are selected to accomplish a remedy. The requirements do not determine the remedial action alternative but indicate how a selected alternative must be achieved. The action-specific requirements may specify particular performance levels, actions, or technologies, as well as specific levels (or a methodology for setting specific levels) for discharged or residual contaminants.

The action-specific ARAR pertaining to the Monticello site is:

Uranium Mill Tailings Radiation Control Act of 1978, as amended (UMTRCA)

This act requires that design objectives be met in order to protect the public health and environment. Emphasis is on effective long-term stabilization and isolation, control of radon and gamma emissions from the tailings, and protection of water quality. Specific objectives for long-term stabilization and isolation include:

- The reduction of human intrusion to prevent the use of tailings as construction material;
- The protection of tailings from wind and surface water erosion;
- The prevention of the spread of contamination by flooding; and
- The prevention of tailings contamination of ground and surface water.

Pursuant to the UMTRCA regulations at 40 DFR 192, the following design objectives have been established for the Monticello site:

- Design controls that will be effective for up to 1000 years or to the extent reasonably achievable, and, in any case, for at least 200 years.
- Reduce the average radon flux from the site to levels consistent with EPA Standards.
- Reduce contaminant (radium-226) concentrations in areas released for unrestricted use to levels consistent with EPA standards.
- Ensure that existing or anticipated beneficial uses of ground and surface water are not adversely affected.
- Protect against release of contaminants from the site during construction.
- Minimize the number and extent of areas disturbed and minimize exposure to contaminated material during construction.
- Design to minimize the areal extent of the final disposal area.
- Provide flood protection and runoff and sediment control.
- Prevent inadvertent human intrusion into the stabilized tailings.
- Design radon covers to include barriers to minimize animal burrowing and plant-root penetration into the stabilized tailings.
- Design remedial action to rely primarily on passive control methods.

3.5 Federal Criteria, Advisories, and Guidance To Be Considered

National Environmental Policy Act of 1969, as amended (NEPA)

The provisions of this Act would be considered for off-site removals. Additional guidance that would be considered under NEPA includes the Council on Environmental Quality regulations, 40 CFR Part 1500; DOE Guidelines (45 FR 20694, 45 FR 53199, 45 FR 78756, 47 FR 7976); and DOE Order 5440.1C (Implementation of NEPA).

Department of Energy Order 5480.1A (Environmental Protection, Safety and Health Protection Program for DOE Operations)

The purpose of this guidance is to establish standards and requirements for operations of the DOE and DOE contractors with respect to protection of the public and the environment against radiation. The standards have been developed to protect soils, aquifers, and natural resources against avoidable contamination by radioactive materials and to provide criteria for limiting the doses to aquatic organisms. Also to be considered with these orders because of their similarity are 5480.4 Environmental Protection, Safety and Health Protection Standards.

U.S. Department of Energy Guidelines For Residual Radioactive Material at Formerly Utilized Sites Remedial Action Program And Remote Surplus Facilities Management Program (Revision 2, March 1987)

This document presents radiological protection guidelines for cleanup of residual radioactive material and management of the resulting wastes and residues. It is applicable to sites identified by the Former Utilized Sites Remedial Action Program (FUSRAP) and to remote sites identified by the Surplus Facilities Management Program (SFMP). Covered in this document are basic dose limits, guidelines, and authorized limits for residual radioactive material and requirements for control of radioactive wastes and residues.

Executive Order 11988

This presidential order requires federal agencies to evaluate the potential effects of actions they may take in a floodplain to avoid, to the maximum extent possible, the adverse impacts associated with direct and indirect development of a floodplain. Off-site disposal siting criteria preclude the use of floodplains for radioactive waste disposal. This order is to be considered for remedial action alternative selection.

Floodplain/Wetlands Environmental Review Requirements

These requirements are found at 10 CFR Part 1022 and establish policy and procedures for discharging the Department of Energy's responsibilities with respect to compliance with E.O. 11988 listed above. They have been considered throughout the compliance process as is evidenced by the Federal Register, Notice of Floodplain Involvement, and opportunity for public comment of May 2, 1986, for the Monticello Millsite.

4.0 State ARARs

The U.S. DOE recognizes the iterative nature of the ARARs identification and analysis process. The State of Utah has proposed potential ARARs and has provided DOE with this list. Additional requirements deemed applicable or relevant and appropriate may be identified and/or items may be deleted as the list of "potential" ARARs is further refined by the State, EPA, and the DOE.

Twenty-seven State of Utah Proposed Potential ARARs were submitted to the DOE in a document dated March 20, 1989 (attached as Appendix A). These ARARs were analyzed by the DOE for either potential applicability or relevancy and appropriateness. This analysis is presented in Table 3.

Of the 27 proposed ARARs, only 10 are found to be potentially applicable or relevant and appropriate to the Monticello Remedial Action Project. These ARARs are listed in Table 4.

Table 1. Analysis of Potentially Applicable or Relevant and Appropriate Requirements (ARARs) Federal Standards, Criteria, and Limitations for Stabilization South of Present Site

Standard, Requirement, Criteria, or Limitation	Citation	Description	Status	Comment
Safe Drinking Water Act	42 USC 300g			
National Primary Drinking Water Standards	40 CFR Part 141	Establishes health-based standards for public water systems (maximum containment levels).	Neither applicable nor relevant and appropriate.	Intakes for local water systems are upstream of the site.
National Secondary Drinking Water Standards	40 CFR Part 143	Establishes welfare-based standards for public water systems (secondary maximum containment levels).	Neither applicable nor relevant and appropriate.	Intakes for local water systems are upstream of the site.
Clean Water Act	33 USC 1251-1376			
Water Quality Criteria	40 CFR Part 131 Quality Criteria for Water, 1986	Sets criteria for states to set water quality standards based on toxicity to aquatic organisms and human health.	Applicable through the State of Utah Standards.	Evidence exists for contamination of surface waters of Montezuma Creek.
Dredge or Fill Requirements (Section 404)	40 CFR Parts 230, 231 33 CFR Part 323	Requires permits for discharge of dredged or fill material into navigable waters.	Applicable	Discharge of dredged or fill material into navigable waters or wetlands may occur during construction and remedial action on Montezuma Creek.
Clean Air Act	42 USC 7401-7462			
National Primary and Secondary Ambient Air Quality Standards	40 CFR Part 50	Establishes standards for ambient air quality to protect public health and welfare (includes standards for particulate matter and lead).	Applicable through the State of Utah Standards.	Federal standards are applicable, but are implemented through the air program of the State of Utah.

Table 1 (continued). Analysis of Potentially Applicable or Relevant and Appropriate Requirements (ARARs) Federal Standards, Criteria, and Limitations for Stabilization South of Present Site

Standard, Requirement, Criteria, or Limitation	Citation	Description	Status	Comment
Resource Conservation and Recovery Act (RCRA)	42 U.S.C. 6901 40 CFR Parts 260-280	RCRA requirements for treatment, storage, or disposal of hazardous waste apply to a Superfund site if the site contains RCRA listed or characteristic hazardous waste that was treated or disposed of after the effective date of the RCRA regulations that are under consideration as potential ARARs for the site, or if the CERCLA activity at the site constitutes current treatment storage, or disposal of RCRA hazardous waste.	Neither applicable nor relevant and appropriate	Characterization at the Monticello mill site shows that no RCRA listed or characteristic hazardous waste was treated or disposed of at the site and no treatment, storage, or disposal of a RCRA hazardous is taking or has taken place.
Uranium Mill Tailings Radiation Control Act	42 USC 2022, 42 USC 7901-7942 40 CFR Part 192	Establishes health-based standards for control of residual radioactive materials from inactive uranium processing sites and health-based standards for cleanup of lands and buildings having radioactive materials from inactive uranium processing sites. Also establishes supplemental standards for performing remedial actions that come as close to meeting the otherwise applicable standard as is reasonable under the circumstances.	Relevant and appropriate as an action-specific and chemical specific ARAR	Although the standards apply only to certain specifically designated sites where uranium was processed, they are relevant and appropriate because uranium and vanadium were processed at the site, and it is the gross alpha and metals content of uranium processing wastes that are regulated by these standards. (Standards attached as Table 2.)
Occupational Safety and Health Act	29 USC 651-678 29 CFR 1910.96 29 CFR 1926.58	Regulates worker health and safety.	Applicable as an action-specific and chemical-specific ARAR	Under 40 CFR 300.38, requirements of this Act apply to all response activities under the NCP. These requirements incorporate the radiation exposure limits of 10 CFR Part 20. The asbestos health standards are also addressed by this Act.

Table 1 (continued). Analysis of Potentially Applicable or Relevant and Appropriate Requirements (ARARs) Federal Standards, Criteria, and Limitations for Stabilization South of Present Site

Standard, Requirement, Criteria, or Limitation	Citation	Description	Status	Comment
National Historic Preservation Act	16 USC 470 40 CFR 6.301(b)	Requires Federal agencies to take into account the effect of any Federally assisted undertaking or licensing on a structure or object that is included on or eligible for the National Register of Historic Places.	Applicable as a location-specific ARAR.	Applies to any district, site, building, structure, or object listed on or eligible for the National Register.
Archeological and Historic Preservation Act	16 USC 469 40 CFR 6.301(c)	Establishes procedures to provide for preservation of historical and archeologiacal data which might be destroyed through alteration of terrain as a result of a Federal construction project or a Federally licensed activity or program.	Applicable as a location-specific ARAR.	Applies if the disposal alternative would affect historical or archeological sites.
Fish and Wildlife Coordination Act	16 USC 661-666 40 CFR 6.302(g)	Requires consultation when a Federal department or agency proposes or authorizes any modification of any stream or other water body; requires adequate provisions for protection of fish and wildlife resources.	Relevant and appropriate as a location-specific ARAR.	The Montezuma Creek channel may be modified during construction, which may result in habitat loss for fish and wildlife species.

MONTICELLO REMEDIAL ACTION PROJECT

Table 1A. Analysis of Potentially Applicable or Relevant and Appropriate Requirements (ARARs)
Federal Standards, Criteria, and Limitations for Removal to a Licensed Repository

Standard, Requirement, Criteria, or Limitation	Citation	Description	Status	Comment
Safe Drinking Water Act	42 USC 300g			
National Primary Drinking Water Standards	40 CFR Part 141	Establishes health-based standards for public water systems (maximum containment levels).	Neither applicable nor relevant and appropriate.	Intakes for local water systems are upstream of the site.
National Secondary Drinking Water Standards	30 CFR Part 143	Establishes welfare-based standards for public water systems (secondary maximum containment levels).	Neither applicable nor relevant and appropriate.	Intakes for local water systems are upstream of the site.
Clean Water Act	33 USC 1251-1376			
Water Quality Criteria	40 CFR Part 131 Quality Criteria for Water, 1986	Sets criteria for states to set water quality standards based on toxicity to aquatic organisms and human health.	Applicable through the State of Utah Standards	Evidence exists for contamination of surface waters of Montezuma Creek.
Dredge or Fill Requirements (Section 404)	40 CFR Parts 230, 231 33 CFR Part 323	Requires permits for discharge of dredged or fill material into navigable waters.	Applicable	Discharge of dredged or fill material into navigable waters or wetlands may occur during construction and remedial action on Montezuma Creek.
Clean Air Act	42 USC 7401-7462			
National Primary and Secondary Ambient Air Quality Standards	40 CFR Part 50	Establishes standards for ambient air quality to protect public health and welfare (includes standards for particulate matter and lead).	Applicable through the State of Utah Standards.	Federal standards are applicable, but are implemented through the air program of the State of Utah.

Table 1A (continued). Analysis of Potentially Applicable or Relevant and Appropriate Requirements (ARARs) Federal Standards, Criteria, and Limitations for Removal to a Licensed Repository

Standard, Requirement, Criteria, or Limitation	Citation	Description	Status	Comment
Resource Conservation and Recovery Act (RCRA)	42 U.S.C. 6901 40 CFR Parts 260-280	RCRA requirements for treatment, storage, or disposal of hazardous waste apply to a Superfund site if the site contains RCRA listed or characteristic hazardous waste that was treated or disposed of after the effective date of the RCRA regulations, or if the CERCLA activity at the site involves treatment, storage, or disposal of RCRA hazardous wastes.	Neither applicable nor relevant and appropriate	Characterization at the Monticello mill site shows that no RCRA listed or characteristic hazardous waste was treated or disposed of at the site and no treatment, storage, or disposal of a RCRA hazardous waste is expected to take place.
Uranium Mill Tailings Radiation Control Act	42 USC 2022, 42 USC 7901-7942 40 CFR Part 192	Establishes health-based standards for control of residual radioactive materials from inactive uranium processing sites and health-based standards for cleanup of lands and buildings having radioactive materials from inactive uranium processing sites. Also establishes supplemental standards for performing remedial actions that come as close to meeting the otherwise applicable standard as is reasonable under the circumstances.	Relevant and appropriate as an action-specific and chemical specific ARAR	Although the standards apply only to certain specifically designated sites where uranium was processed, they are relevant and appropriate because uranium, vanadium, and radium were processed at the site, and it is the radium gross alpha and metals content of uranium processing wastes that are regulated by these standards. (Standards attached as Table 2.)
Occupational Safety and Health Act	29 USC 651-678 29 CFR 1910.96 29 CFR 1926.58	Regulates worker health and safety.	Applicable as an action-specific and chemical-specific ARAR.	Under 40 CFR 300.38, requirements of this Act apply to all response activities under the NCP. These requirements incorporate the radiation exposure limits of 10 CFR Part 20. The asbestos health standards are also addressed by this Act.

MONTICELLO REMEDIAL ACTION PROJECT

Table 1A (continued). Analysis of Potentially Applicable or Relevant and Appropriate Requirements (ARARs) Federal Standards, Criteria, and Limitations for Removal to a Licensed Repository

Standard, Requirement, Criteria, or Limitation	Citation	Description	Status	Comment
National Historic Preservation Act	16 USC 470 40 CFR 6.301(b)	Requires Federal agencies to take into account the effect of any Federally assisted undertaking or licensing on a structure or object that is included on or eligible for the National Register of Historic Places.	Applicable as a location-specific ARAR.	Applies to any district, site, building, structure, or object listed on or eligible for the National Register.
Archeological and Historic Preservation Act	16 USC 469 40 CFR 6.301(c)	Establishes procedures to provide for preservation of historical and archeological data which might be destroyed through alteration of terrain as a result of a Federal construction project or a Federally licensed activity or program.	Applicable as a location-specific ARAR.	Applies if the disposal alternative would affect historical or archeological sites.
Fish and Wildlife Coordination Act	16 USC 661-666 40 CFR 6.302(g)	Requires consultation when a Federal department or agency proposes or authorizes any modification of any stream or other water body; requires adequate provisions for protection of fish and wildlife resources.	Relevant and appropriate as a location-specific ARAR.	The Montezuma Creek channel may be modified during construction, which may result in habitat loss for fish and wildlife species.
Endangered Species Act	16 USC 1531-1543 50 CFR Parts 17, 402 40 CFR 6.302 (h)	Requires that Federal agencies ensure that any action authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify critical habitat.	Relevant and appropriate for off-site alternatives as a location-specific ARAR	Threatened or endangered species and critical habitat are not present on the site.

MONTICELLO REMEDIAL ACTION PROJECT

Table 2. URANIUM MILL TAILINGS RADIATION CONTROL ACT OF 1978 GROUND WATER STANDARDS[1], 40 CFR 192

Maximum Concentration of Constituents for Ground Water Protection

Constituent	Maximum concentration[2]
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium	0.05
Lead	0.05
Mercury	0.002
Molybdenum	No concentration[3]
Silver	0.05
Uranium	No concentration[3]
Endrin (1,2,3,4,10,10-hexachloro-1,7-epoxy-1,4,4a,5,6,7,8,9a-octahyrdo-1, 4-endo, endo-5.8-dimethano naphthalene)	0.0002
Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer)	0.004
Methoxychlor (1,1,1,-Trichloro-2,2-bis (p-methoxyphenylethane)	0.1
Toxaphene ($C_{10}H_{10}Cl_4$ Technical chlorinated camphene, 67-69 percent chlorine)	0.0005
2,4-D (2,4 Dichlorophenoxyacetic acid)	0.1
2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid)	0.01
	pCi/L
Combined radium-226 and radium-226	5
Gross alpha-particle activity (excluding radon and uranium)	15

[1]40 CFR 192; revised 7/1/86.
[2]Milligrams per liter.
[3]To the list of hazardous constituents are added the chemical elements molybdenum and uranium, however no concentration limits have been promulgated. EPA is proposing to delist molybdenum from the Safe Drinking Water Act (SDWA) see FR 1892, January 22, 1988.

Table 2A. Health and Environmental Protection Standards for Uranium Mill Tailings 40 CFR Part 192

Subpart A - Standards for the control of Residual Radioactive Materials from Inactive Processing Sites

192.02 Standards

Control shall be designed to:

(a) Be effective for up to one thousand years, to the extent reasonably achievable, and, in any case, for at least 200 years, and,

(b) Provide reasonable assurance that releases of radon-222 from residual radioactive material to the atmosphere will not:

(1) Exceed an average release rate of 20 picocuries per square meter per second, or
(2) Increase the annual average concentration of radon-222 in air at or above any location outside the disposal site by more than one-half picocurie per liter.

Subpart B - Standards for Cleanup of Land and Buildings Contaminated with Residual Radioactive Materials from Inactive Uranium Processing Sites

192.12 Standards

Remedial actions shall be conducted so as to provide reasonable assurance that, as a result of residual radioactive materials from any designated processing site:

(a) The concentration of radium-226 in land averaged over any area of 100 square meters shall not exceed the background level by more than -

(1) 5 pCi/g, averaged over the first 15 cm of soil below the surface, and
(2) 15 pCi/g, averaged over 15 cm thick layers of soil more than 15 cm below the surface.

(b) In any occupied or habitable building -

(1) The objective of remedial action shall be, and reasonable effort shall be made to achieve, an annual average (or equivalent) radon decay product concentration (including background) shall not exceed 0.03 WL, and
(2) The level of gamma radiation shall not exceed the background level by more than 20 microroentgens per hour.

Subpart C - Implementation (condensed)

192.21 Criteria for Applying Supplemental Standards

The implementing agencies may apply standards in lieu of the standards of Subparts A or B if certain circumstances exist, as defined in 192.21.

192.22 Supplemental Standards

"Federal agencies implementing Subparts A and B may in lieu thereof proceed pursuant to this section with respect to generic or individual situations meeting the eligibility requirements of 192.21."

(a) "...the implementing agencies shall select and perform remedial actions that come as close to meeting the otherwise applicable standards as is reasonable under the circumstances."

(b) "...remedial actions shall, in addition to satisfying the standards of Subparts A and B, reduce other residual radioactivity to levels that are as low as is reasonably achievable."

(c) "The implementing agencies may make general determinations concerning remedial actions under this Section that will apply to all locations with specified characteristics, or they may make a determination for a specific location, the Department of Energy shall inform any private owners and occupants of the affected location and solicit their comments. The Department of Energy shall provide any such comments to the other implementing agencies [and] shall also periodically inform the Environmental Protection Agency of both general and individual determination under the provisions of this section."

MONTICELLO REMEDIAL ACTION PROJECT

TABLE 3. Analysis of State of Utah Proposed Potential Applicable or Relevant and Appropriate Requirements (ARARs)

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
A. Department of Agriculture	1. Pesticide Control--safe and appropriate use of pesticides	Title 4, Chapter 14, Utah Code Annotated (U.C.A)	R68-07 Utah Administrative Code (U.A.C)	See particularly R68-07-10, U.A.C., regarding storage, transport and disposal and R68-07-11, U.A.C., regarding other unlawful acts. Neither applicable nor relevant and appropriate.
B. Division of Wildlife Resources, Department of Natural Resources	1. General definitions--definitions for Wildlife Resources Code, Title 23, Chapter 13, U.C.A	23-13-2. U.C.A.	None	Neither applicable nor relevant and appropriate.
	2. Diversion of water--diversion endangering protected aquatic wildlife prohibited.	23-15-3, U.C.A	None	Neither applicable nor relevant and appropriate. Recent surveys show no protected wildlife exists exists in Montezuma Creek.
	3. Water pollution -- pollution of waters containing protected aquatic wildlife (including specified invertebrates) unlawful.	23-15-6, U.C.A.	None	Neither applicable nor relevant and appropriate. Recent surveys show no protected wildlife exists in Montezuma Creek.
C. Division of Oil, Gas and Mining, Department of Natural Resources	1. Mine Safety Provisions -- regarding subsidence, fire protection and first aid materials.	Title 40, Chapter 8, U.C.A.	None	Neither applicable nor relevant or appropriate.
	2. Reclamation of lands mined for minerals -- specifies standards for such reclamation.	Title 40, Chapter 8, U.C.A	R13-1M, U.A.C	See particularly R13-1M-10, U.A.C. Neither applicable nor relevant and appropriate. The remedial action is not a mining operation.

TABLE 3 (cont). Analysis of State of Utah Proposed Potential Applicable or Relevant and Appropriate Requirements

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
C. Division of Oil, Gas and Mining, (cont.)	3. Mining Standards -- standards governing operation and reclamation of strip mines.	Title 40, Chapter 10, U.C.A	R614, U.A.C	See particularly 40-10-17, U.C.A. Neither applicable nor relevant or appropriate. The remedial action is not a mining operation.
D. State Engineer, Department of Natural Resources	1. Well drilling standards --standards for drilling and abandonment of wells.	73-3-25, U.C.A	R625-4, U.A.C	Includes such requirements as performance standards for casing, joints, requirements for abandoning a well. Potentially applicable.
	2. Relocation of natural streams--procedures and standards governing rechanneling of stream beds.	73-3-29, U.C.A.	None	Potentially applicable.
	3. Dam Safety -- standards governing integrity of water impoundment structures, including construction design and removal.	73-5-5 through 7 and 73-5-12, U.C.A	R625-3, U.A.C.	See particularly R625-3-10 and 11, U.A.C. No dams are anticipated to be constructed by remedial action. Neither applicable nor relevant and appropriate.
E. Division of State History, Department of Community and Economic Development	1. Protection of archaeological, anthropological and paleontological resources.	63-18-18 through 38, U.C.A.	R224, U.A.C.	See particularly Section 63-18-18, U.C.A., stating legislative interest in preservation of archaeological, anthropological and paleontological resources, Section 63-18-25, U.C.A., regarding historical resources on state lands, and Section 63-18-37, U.C.A. regarding projects by state agencies. Potentially applicable as a location-specific ARAR.

TABLE 3 (cont). Analysis of State of Utah Proposed Potential Applicable or Relevant and Appropriate Requirements

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
F. Industrial Commission	1. Utah Occupational Safety and Health Standards	Title 35, Chapter 9, U.C.A.	R500, U.A.C.	These rules are performance standards identical to federal OSHA regulations. Potentially relevant and appropriate.
G. Bureau of Solid and Hazardous Waste, Division of Environmental Health, Department of Health	1. Solid Waste	Title 26, Chapter 14, U.C.A.	Not yet codified; copy available from the Bureau of Solid and Hazardous Waste.	These rules govern solid waste landfills. Neither applicable nor relevant and appropriate.
	2. Solid and Hazardous waste	Title 26, Chapter 11, U.C.A.	R450, U.A.C.	These rules are substantively identical to the federal rules promulgated under the Resource Conservation and Recovery Act, with the following exceptions:
		Title 26, Chapter 11, U.C.A	R450, U.A.C	R450-2-1 (Table 2-III): listings for K048 and K051 (separator sludges) are broader than federal listings; R450-2-1 (Table 2-I): listing for F999 (military agent) has no corresponding federal provision; R450-9, regarding spill reporting requirements, has no corresponding federal provisions;

MONTICELLO REMEDIAL ACTION PROJECT

TABLE 3 (cont). Analysis of State of Utah Proposed Potential Applicable or Relevant and Appropriate Requirements

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
G. Bureau of Solid and Hazardous Waste, Division of Environmental Health, Department of Health	2. Solid and Haz-Waste (cont.)	Title 26, Chapter 11, U.C.A	R450, U.A.C	R450-101, which will be promulgated shortly, lists criteria to be considered in establishing clean-up standards. Because no hazardous waste has been characterized and uranium mill tailings are a by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 USC 2011 et seq. they are excluded from the RCRA and State Solid and Hazardous Waste laws. The state rules are therefore neither applicable nor relevant and appropriate.
H. Bureau of Water Pollution Control, Division of Environmental Health, Department of Health	1. Definitions for Water Pollution Rules and General Requirements	Title 26, Chapter 11, U.C.A.	R448-1, U.A.C.	Potentially applicable in lieu of federal standards.
	2. Standards for Quality for Water of the State	Title 26, Chapter 11, U.C.A.	R448-2, U.A.C.	These rules are specific to Utah waters, though they are derived in part from federal criteria. These rules are potentially applicable as chemical-specific ARARs, see Table 5.
	3. Sewers and wastewater treatment works	Title 26, Chapter 11, U.C.A.	R448-3, U.A.C.	Construction and performance requirements. Neither applicable nor relevant and appropriate.

TABLE 3 (cont). Analysis of State of Utah Proposed Potential Applicable or Relevant and Appropriate Requirements

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
H. Bureau of Water Pollution Control (cont.)	4. Large underground wastewater disposal systems	Title 26, Chapter 11, U.C.A.	R448-5, U.A.C.	Governs domestic wastewater systems. Neither applicable nor relevant and appropriate.
	5. Surface disposal of produced water from gas and oil wells	Title 26, Chapter 11, U.C.A.	R448-6, U.A.C.	Neither applicable nor relevant and appropriate.
	6. Underground injection control	Title 26, Chapter 11, U.C.A.	R448-7, U.A.C.	See particularly R448-7-9 specifying technical requirements. Neither applicable nor relevant and appropriate.
	7. Utah pollution discharge elimination system	Title 26, Chapter 11, U.C.A.	R448-8, U.A.C.	See particularly R448-8-7 specifying criteria and standards. Neither applicable nor relevant and appropriate.
	8. Ground water protection	Title 26, Chapter 11, U.C.A.	Not yet assigned	The Bureau of Water Pollution Control, in cooperation with other bureaus in the division, will soon be promulgating ground-water protection standards. There is no corresponding federal program. Potentially applicable as a chemical-specific ARAR.
I. Bureau of Air Quality, Division of Environmental Health, Department of Health	1. Utah Air Conservation Rules	Title 26, Chapter 13, U.C.A	R446-1, U.A.C.	These rules are substantively identical to corresponding federal regulation, with the following exceptions:
		Title 26, Chapter 13, U.C.A.	R446-1, U.A.C	R446-1-1.25 and R446-1-3.1.8, which require application of best available control technology for any source;

MONTICELLO REMEDIAL ACTION PROJECT

TABLE 3 (cont). Analysis of State of Utah Proposed Potential Applicable or Relevant and Appropriate Requirements

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
I. Bureau of Air Quality, Division of Environmental Health, Department of Health (cont.)	1. Utah Air Conservation Rules. (cont.)			R446-1-3.11, which lists criteria to be considered in establishing visibility standards; R446-1-4.1, which sets visible emission standards; R446-1-4.2, which sets standards for sulfur content in fuels; R446-1-4.5, which regulates fugitive dust emissions; and R446-1-5.1, which allows the State to require temporary closure of air pollution sources in the event of an air pollution emergency episode. These rules may be potentially applicable as chemical-specific ARARs, with exception of R446-i-4.2.
J. Bureau of Drinking Water/Sanitation, Division of Environmental Health, Department of Health	1. Utah Public Drinking Water Rules	Title 26, Chapter 12 U.C.A	R449, U.A.C.	See particularly R449-103 establishing drinking water standards. These standards are identical to federal standards except with respect to sulfate, TDS, and flouride. Neither applicable nor relevant and appropriate.
K. Bureau of Radiation Control, Division of Environmental Health Department of Health	1. General provisions -- definition and other provisions applicable to following subjects	26-1-5, U.C.A., and 26-1-27 through 29, U.C.A.	R447-12, U.A.C.	Potentially applicable.

TABLE 3 (cont). Analysis of State of Utah Proposed Potential Applicable or Relevant and Appropriate Requirements

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
K. Bureau of Radiation Control, Division of Environmental Health (cont.)	2. Licensing requirements for handling radioactive materials	26-1-5, U.C.A. and 26-1-27 through 29, U.C.A.	R447-19, 21 and 22, U.A.C.	Although these provisions relate primarily to licensing requirements, they also contain some substantive standards. See, e.g., R447-19-500 regarding standards for transportation. Potentially applicable as action-specific ARARs for off-site removal actions.

Table 4. State of Utah Potentially Applicable or Relevant and Appropriate Requirements (ARARs) for the Monticello Millsite as Determined by the U.S. Department of Energy

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
1. Division of Water Rights	Well drilling standards - standards for drilling and abandonment of wells	73-3-25, U.C.A.	R625-4, U.A.C.	Includes such requirements as performance standards for casing joints, reguirements for abandoning a well. This law is potentially applicable to all drilling anticipated for any of the alternatives.
2. Division of Water Rights	Relocation of natural streams - procedures and standards governing re-channeling of stream beds	73-3-29, U.C.A	None	This law is potentially applicable to any alternative which could alter the location of Montezuma Creek.
3. Division of State History	Protection of archaeological, anthropological and paleontological resources	63-18-18, U.C.A.	R224, U.A.C.	Section 63-18-18, U.C.A., states legislative interest in preservation of archaeological, anthropological and paleontological resources, Section 63-18-25, U.C.A., addresses historical resources on state lands, and Section 63-18-37, U.C.A. addresses projects by state agencies.
4. Industrial Commission	Utah Occupational Safety and Health Standards	Title 25, Chapter 9, U.C.A.	R500, U.A.C.	These rules are identical to federal OSHA regulations and may be applicable to all remedial action alternatives.
5. Division of Environmental Health	Definitions for Water Pollution Rules and General Requirements	Title 26, Chapter 11, U.C.A.	R448-1	None
6. Division of Envrionmental Health	Standards for Quality for Waters of the State	Title 26, Chapter 11, U.C.A.	R448-2	These rules are specific to Utah waters, though they are derived in part by using federal criteria. See particularly the non-degradation policy in R448-2-3.

Table 4 (cont). State of Utah Potentially Applicable or Relevant and Appropriate Requirements (ARARs) for the Monticello Millsite as Determined by the U.S. Department of Energy

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
6. Division of Environmental Health (cont.)	Standards for Quality for Waters of the State			Although federal criteria cannot be used for the purposes of ARARs these promulgated state rules and regulations will be addressed as potential ARARs.
7. Division of Environmental Health	Groundwater protection	Title 26, Chapter 11, U.C.A	Not yet assigned	The Bureau of Water Pollution Control, in cooperation with other bureaus in the Division, will soon be promulgating ground-water protection standards. There is no corresponding federal program. These standards will be addressed as potential ARARs as soon as they are promulgated.
8. Division of Envrionmental Health	Utah Air Conservation Rules	Title 26, Chapter 13, U.C.A.	R446-1	These rules are substantively identical to corresponding federal regulations, with the following exceptions: R446-1-1.25 and R446-1-3.1.8, which require application of best available control technology for any source; R446-1-3.11, which lists criteria to be considered in establishing visibility standards; R446-1-4.1, which sets visible emission standards; R446-1-4.5, which regulates fugitive dust emissions; and R446-1-5.1, which allows the State to require temporary closure of air pollution sources in the event of an air pollution emergency episode.

Table 4 (cont). State of Utah Potentially Applicable or Relevant and Appropriate Requirements (ARARs) for the Monticello Millsite as Determined by the U.S. Department of Energy

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
8. Division of Environmental Health (cont.)	Utah Air Conservation Rules (cont.)			These rules may be potentially applicable specifically regarding fugitive dust emission from remedial action activities.
9. Division of Environmental Health - Bureau of Radiation Control	General provisions - Definitions and other provisions applicable to following subjects.	26-1-5, U.C.A., and 26-1-27 through 29, U.C.A.	R447-1?, U.A.C.	
10. Division of Environmental Health - Bureau of Radiation Control	Licensing requirements for handling radioactive materials.	25-1-5, U.C.A., and 26-1-27 through 29, U.C.A.	R447-19, 21 and 22, U.A.C.	Although these provisions relate primarily to licensing requirements, they also contain some substantive standards. Example: R447-19-500 states the standards for transportation radioactove materials. These standards may be relevant and appropriate.

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TABLE 5. NUMERICAL STANDARDS FOR PROTECTION OF MONTEZUMA CREEK AND TRIBUTARIES, UPSTREAM FROM MONTICELLO, UTAH

Constituent	Classification: Domestic Source 1C	Classification: Aquatic Wildlife 3A	Classification: Agriculture 4
Bacteriological (No.100 ml)			
(30-day Geometric Mean)			
Maximum Total Coliforms	5,000	*	*
Maximum Fecal Coliforms	2,000	*	*
Physical			
Total Dissolved Gasses	*	(b)	*
Minimum DO (mg/L) (a)	5.5	6.0	*
Maximum Temperature	*	20°C	*
Maximum Temp. Change	*	2°C	*
pH	6.5-9.0	6.5-9.0	6.5-9.0
Turbidity increase (c)	*	10 NTU	*
Chemical			
Arsenic, total	.05	*	.1
Barium, total	1	*	*
Cadmium, total	.010	.0004(d)	.01
Chromium, total	.05	.10	.10
Copper, total	*	.01	.2
Cyanide	*	.005	*
Iron, total	*	1.0	*
Lead, total	.05	.05	.1
Mercury, total	.002	.00005	*
Phenol	*	.01	*
Selenium, total	.01	.05	.05
Silver, total	.05	.01	*
Zinc, total	*	.05	*
NH_3 as N (un-ionized)	*	.02	*
Chlorine	*	.002	*
Fluoride, dissolved (e)	1.4-2.4	*	*
NO_3	10		
Boron, dissolved	*	*	.75
H_2S	*	.002	*
TDS (f)	*	*	1200
Radiological (Maximum pCi/L)			
Gross Alpha	15	15(g)	15(g)
Radium 226, 228 combined	5	*	*
Strontium 90	8	*	*
Tritium	20,000	*	*
Pesticides (Maximum ug/L)			
Endrin	.2	.004	*
Lindane	4	.01	*
Methoxychlor	100	.03	*
Toxachene	5	.005	*
2, 4-D	100	*	*
2, 4, 5-TP	10	*	*
Pollution Indicators (g)			
Gross Beta (pCi/L)	50	50	50
BOD (mg/L)	5	5	5
NO_3 as N (mg/L)		4	*
PO_4 as P (mg/L) (h)	*	.05	*

TABLE 5. (contniued) NUMERICAL STANDARDS FOR PROTECTION OF MONTEZUMA CREEK AND TRIBUTARIES, UPSTREAM FROM MONTICELLO, UTAH†

† From Utah State Standards, published by the Bureau of National Affairs, Inc., Washington, D.C. 20037.

* Insufficient evidence to warrant the establishment of numerical standard. Limits assigned on case-by-case basis.

(a) These limits are not applicable to lower water levels in deep impoundments.

(b) Not to exceed 110% of saturation.

(c) For Classes 2A, 2B, 3A, 3B at background levels of 100 NTUs or greater, a 10% increase limit will be used instead of the numeric values listed. For Class 3D at background levels of 150 NTUs or greater, a 10% increase limit will be used instead of the numeric value listed. Short term variances may be considered on a case-by-case basis.

(d) Limit shall be increased threefold if $CaCO_3$ hardness in water exceeds 150 mg/L.

(e) Maximum concentration varies according to the daily maximum mean air temperature.

Temp. °C	mg/L
12.0 and below	2.4
12.1 to 14.6	2.2
14.7 to 17.6	2.0
17.7 to 21.4	1.3
21.5 to 26.2	1.6
26.3 to 32.5	1.4

(f) Total dissolved solids (TDS) limit may be adjusted on a case-by-case basis.

(g) Investigations should be conducted to develop more information where these pollution indicator levels are exceeded.

(h) PO4 as P(mg/L) limit for lakes and reservoirs shall be .025.

APPENDIX A

Proposed List of ARARs for the State of Utah

DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH

Norman H. Bangerter
Governor
Suzanne Dandoy, M.D., M.P.H.
Executive Director
Kenneth L. Alkema
Director

288 North 1460 West
P.O. Box 16690
Salt Lake City, Utah 84116-0690
(801) 538-6121

BSHW-5523z-1

Mr. Dee Williamson
U.S. Department of Energy
Grant Junction Project Office
P. O. Box 2567
Grand Junction, Colorado 81503

Dear Mr. Williamson:

In reference to the Monticello Site, we have enclosed a proposed list of ARAR's for the State of Utah. The list is provided to fulfill the requirements of Section IX (H) of the Monticello Federal Facilities Agreement. The enclosed Hazardous Substances Mitigation Fund is the latest addition to this list. The proposed Ground Water Quality Protection Regulations are only in draft form.

If there are any questions about the potential ARAR's, please contact Bob McLeod at (801) 538-6170.

Sincerely,

Brent C. Bradford, Director
Bureau of Solid and Hazardous Wastes

Enclosure

c: Lam Nguyen, EPA, Denver, CO
Clayton R. Nichols, DOE, Idaho
Leo Little, DOE, Colorado
W. E. Murphie, DOE, Washington DC

BCB/RM/ljr

POTENTIAL ARARS FOR THE STATE OF UTAH

A. DEPARTMENT OF AGRICULTURE

1. Subject: Pesticide control -- safe and appropriate use of pesticides.
   Statute: Title 4, Chapter 14, Utah Code Annotated (U.C.A.)
   Rule: R68-07, Utah Administrative Code (U.A.C.)
   Remarks: See particularly R68-07-10, U.A.C., regarding storage, transport and disposal, and R68-07-11, U.A.C., regarding other unlawful acts.

B. DIVISION OF WILDLIFE RESOURCES, DEPARTMENT OF NATURAL RESOURCES

1. Subject: General definitions -- definitions for Wildlife Resources Code, Title 23, Chapter 13, U.C.A.
   Statute: 23-13-2, U.C.A.
   Rule: None.

2. Subject: Diversion of water -- diversion endangering protected aquatic wildlife prohibited.
   Statute: 23-15-3, U.C.A.
   Rule: None.

3. Subject: Water pollution -- pollution of waters containing protected aquatic wild life (including specified invertebrates) unlawful.
   Statute: 23-15-6, U.C.A.
   Rule: None.

C. DIVISION OF OIL, GAS AND MINING, DEPARTMENT OF NATURAL RESOURCES

1. Subject: Mine Safety Provisions -- provisions regarding subsidence, fire protection and first aid materials.
   Statute: Title 40, Chapter 5, U.C.A.
   Rule: None.

2. Subject: Reclamation of lands mined for minerals -- specifies standards for such reclamation.
   Statute: Title 40, Chapter 8, U.C.A.
   Rule: R13-1M, U.A.C.
   Remarks: See particularly R13-1M-10, U.A.C.

3. Subject: Mining Standards -- standards governing operation and reclamation of strip mines.
   Statute: Title 40, Chapter 10, U.C.A.
   Rule: R614, U.A.C.
   Remarks: See particularly 40-10-17, U.C.A.

2. Subject: Solid and Hazardous waste
Statute: Title 26, Chapter 11, U.C.A.
Rule: R450, U.A.C.
Remarks: These rules are substantively identical to the federal rules promulgated under the Resource Conservation and Recovery Act, with the following exceptions:

- R450-2-1 (Table 2-III): listings for K048 and K051 (separator sludges) are broader than federal listings;
- R450-2-1 (Table 2-I): listing for F999 (military agent) has no corresponding federal provision;
- R450-9, regarding spill reporting requirements, has no corresponding federal provisions;
- R450-101 lists criteria to be considered in establishing clean-up standards.

H. BUREAU OF WATER POLLUTION CONTROL, DIVISION OF ENVIRONMENTAL HEALTH, DEPARTMENT OF HEALTH

1. Subject: Definitions for Water Pollution Rules and General Requirements
Statute: Title 26, Chapter 11, U.C.A.
Rule: R448-1

2. Subject: Standards for Quality for Waters of the State
Statute: Title 26, Chapter 11, U.C.A.
Rule: R448-2
Remarks: These rules are specific to Utah waters, though they are derived in part by using federal criteria. See particularly the non-degredation policy in R448-2-3.

3. Subject: Sewers and wastewater treatment works
Statute: Title 26, Chapter 11, U.C.A.
Rule: R448-3, U.A.C.
Remarks: Construction and performance requirements.

4. Subject: Large underground wastewater disposal systems
Statute: Title 26, Chapter 11, U.C.A.
Rule: R448-5, U.A.C.
Remarks: Governs domestic wastewater systems.

5. Subject: Surface disposal of produced water from gas and oil wells
Statute: Title 26, Chapter 11, U.C.A.
Rule: R448-6, U.A.C.

6. Subject: Underground injection control
   Statute: Title 26, Chapter 11, U.C.A.
   Rule: R448-7, U.A.C.
   Remarks: See particularly R448-7-9 specifying technical requirements.

7. Subject: Utah pollution discharge elimination system
   Statute: Title 26, Chapter 11, U.C.A.
   Rule: R448-8, U.A.C.
   Remarks: See particularly R448-8-7 specifying criteria and standards.

8. Subject: Ground water protection
   Statute: Title 26, Chapter 11, U.C.A.
   Rule: R448-6, U.A.C. (see remarks)
   Remarks: The Bureau of Water Pollution Control, in cooperation with other bureaus in the Division, has begun the notice and comment process for promulgating these ground water protection standards. They are expected to be in place by June 1, 1989. There is no corresponding federal program.

I. BUREAU OF AIR QUALITY, DIVISION OF ENVIRONMENTAL HEALTH, DEPARTMENT OF HEALTH

1. Subject: Utah Air Conservation Rules.
   Statute: Title 26, Chapter 13, U.C.A.
   Rule: R446-1
   Remarks: These rules are substantively identical to corresponding federal regulations, with the following exceptions:

   - R446-1-1.25 and R446-1-3.1.8, which require application of best available control technology for any source;
   - R446-1-3.11, which lists criteria to be considered in establishing visibility standards;
   - R446-1-4.1, which sets visible emission standards;
   - R446-1-4.2, which sets standards for sulfer content in fuels;
   - R446-1-4.5, which regulates fugitive dust emissions; and
   - R446-1-5.1, which allows the State to require temporary closure of air pollution sources in the event of an air pollution emergency episode.

J. BUREAU OF DRINKING WATER/SANITATION, DIVISION OF ENVIRONMENTAL HEALTH, DEPARTMENT OF HEALTH

1. Subject: Utah Public Drinking Water Rules
   Statute: Title 26, Chapter 12.
   Rule: R449, U.A.C.
   Remarks: See particularly R449-103 establishing drinking water standards. These standards are identical to federal standards except with respect to sulfate, TDS and flouride.

K. BUREAU OF RADIATION CONTROL, DIVISION OF ENVIRONMENTAL HEALTH, DEPARTMENT OF HEALTH

1. Subject: General provisions -- definitions and other provisions applicable to following subjects.
   Statute: 26-1-5, U.C.A., and 26-1-27 through 29, U.C.A.
   Rule: R447-12, U.A.C.

2. Subject: Licensing requirements for handling radioactive materials.
   Statute: 26-1-5, U.C.A., and 26-1-27 through 29, U.C.A.
   Rule: R447-19, 21 and 22, U.A.C.
   Remarks: Although these provisions relate primarily to licensing requirements, they also contain some substantive standards. See, e.g., R447-19-500 regarding standards for transportation.

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R450-101 Corrective Action Clean-up Standards Policy -- RCRA, UST, and CERCLA Sites

R450-101-1 Source Elimination

It is the policy of the Solid and Hazardous Waste Committee that the initial step in all corrective actions implemented at RCRA, UST, and CERCLA sites is to take appropriate action to eliminate the source of contamination either through removal or appropriate source control.

R450-101-2 Clean-up Standards Evaluation Criteria

Subsequent to source elimination, clean-up standards for remaining contamination which may include numerical, technology-based or risk-based standards or any combination of those standards, shall be determined on a case-by-case basis, taking into consideration the following criteria:

1. The impact or potential impact of the contamination on the public health.
2. The impact or potential impact of the contamination on the environment.
3. Economic considerations and cost effectiveness of clean-up options.
4. The technology available for use in clean-up.

R450-101-3 Prevention of Further Degradation

It is the policy of the Solid and Hazardous Waste Committee that in determining background concentrations, clean-up standards, and significance levels, levels of contamination in ground water, surface water, soils or air will not be allowed to degrade beyond the existing contamination levels determined through appropriate monitoring or the use of other data accepted by the Committee or the Executive Secretary as representative.

R450-101-4 Clean-up Standards

4.1 It is the policy of the Solid and Hazardous Waste Committee that the following shall be the minimum standards to be met for any clean-up of hazardous substances at a RCRA, UST, or CERCLA facility in Utah: (a) for water-related corrective action, the Maximum Contaminant Limits (MCL's) established under the federal Safe Drinking Water Act or other applicable water classifications and standards; and (b) for air-related corrective action, the appropriate air quality standards established under the Federal Clean Air Act. Other standards as determined applicable by the Committee may be utilized. Clean-up levels below the MCL's or other applicable water or air quality standards may be established by the Committee on a case- by-case basis taking into consideration the Clean-up Standards Evaluation Criteria listed above and the Prevention of Further Degradation Policy.

4.2 In the case of contamination above the MCL or other applicable water or air quality standards, if, after evaluation of all alternatives, it is determined that applicable minimum standards cannot reasonably be achieved, clean-up levels above these minimum standards may be established on a case-by-case basis utilizing the Clean-up Standards Evaluation Criteria and the Prevention of Further Degradation Policy. In assessing the evaluation criteria, the following factors shall be considered:

a. quantity of materials released;
b. mobility, persistence, and toxicity of materials released;
c. exposure pathways;
d. extent of contamination and its relationship to present and potential

surface and ground water locations and uses;
e. type and levels of background contamination; and
f. other relevant standards and factors as determined appropriate by the Committee.

R450-101-5 Significance Level

5.1 It is the policy of the Solid and Hazardous Waste Committee that, where contamination is identified that is below applicable MCL's, water classification standards, or air quality standards or where applicable standards do not exist for either the parameter in question or the environmental media in which the contamination is found, the clean-up standard shall be established using the Clean-up Standards Evaluation Criteria and will be set between background and the observed level of contamination. Should it be determined that the observed level of contamination will be allowed to remain, this becomes the significance level.

5.2 At any time, should continued monitoring identify contamination above the significance level, the Clean-up Standard Evaluation Criteria will be reapplied in connection with the Prevention of Further Degradation Policy to re-evaluate the need for corrective action and determine an appropriate clean-up standard.

R450-101-6 Interim Policy

This policy will remain in effect until such time as the Committee choses to modify it or a federal policy, regulation, or statute applicable to corrective action clean-up levels is established. At the time a federal policy is promulgated the policy will be reviewed for consistancy with the federal action and will be modified as appropriate and in accordance with applicable state law.

KEY: hazardous waste, clean-up standards*
1988 26-14-6

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HAZARDOUS SUBSTANCES MITIGATION FUND

1989

GENERAL SESSION

rolled Copy

B. No. 37 By R. Lee Ellertson

ACT RELATING TO HAZARDOUS SUBSTANCES: EMPOWERING THE HEALTH DEPARTMENT TO DO ABATEMENT AND REMEDIAL INVESTIGATIONS TO ADDRESS RELEASES OF HAZARDOUS SUBSTANCES; ESTABLISHING PROCEDURES, POWERS, AND ENFORCEMENT MECHANISMS; DEFINING LIABILITY AND PENALTIES; DEFINING TERMS; MAKING TECHNICAL CORRECTIONS; APPROPRIATING MONIES; AND PROVIDING AN EFFECTIVE DATE.

:S ACT AFFECTS SECTIONS OF UTAH CODE ANNOTATED 1953 AS FOLLOWS:

ENACTS:

26-14d-101, UTAH CODE ANNOTATED 1953

?6-14d-102, UTAH CODE ANNOTATED 1953

6-14d-201, UTAH CODE ANNOTATED 1953

6-14d-202, UTAH CODE ANNOTATED 1953

6-14d-203, UTAH CODE ANNOTATED 1953

6-14d-204, UTAH CODE ANNOTATED 1953

6-14d-205, UTAH CODE ANNOTATED 1953

6-14d-206, UTAH CODE ANNOTATED 1953

5-14d-207, UTAH CODE ANNOTATED 1953

5-14d-301, UTAH CODE ANNOTATED 1953

5-14d-302, UTAH CODE ANNOTATED 1953

5-14d-401, UTAH CODE ANNOTATED 1953

26-14d-402, UTAH CODE ANNOTATED 1953

26-14d-501, UTAH CODE ANNOTATED 1953

26-14d-502, UTAH CODE ANNOTATED 1953

26-14d-503, UTAH CODE ANNOTATED 1953

26-14d-601, UTAH CODE ANNOTATED 1953

26-14d-602, UTAH CODE ANNOTATED 1953

26-14d-603, UTAH CODE ANNOTATED 1953

26-14d-701, UTAH CODE ANNOTATED 1953

26-14d-702, UTAH CODE ANNOTATED 1953

26-14d-703, UTAH CODE ANNOTATED 1953

26-14d-704, UTAH CODE ANNOTATED 1953

26-14d-801, UTAH CODE ANNOTATED 1953

REPEALS:

26-14-19, AS LAST AMENDED BY CHAPTERS 161 AND 217, LAWS OF UTAH 1987

26-14-20, AS LAST AMENDED BY CHAPTER 113, LAWS OF UTAH 1988

Be it enacted by the Legislature of the state of Utah:

Section 1. Section 26-14d-101, Utah Code Annotated 1953, is enacted to read:

26-14d-101. This act is known as the "Hazardous Substances Mitigation Act."

Section 2. Section 26-14d-102, Utah Code Annotated 1953, is enacted to read:

26-14d-102. As used in this chapter:

(1) "Abatement action" means to take steps to, or contract with someone to take steps to, eliminate or mitigate the direct or immediate threat to the public health or the environment caused by a hazardous materials release.

(2) "CERCLA" means 42 U.S.C. 9601 et. seq., the Comprehensive Environmental Response Compensation and Liability Act.

(3) "Director" means the director of the Division of Environmental Health.

(4) "Division" means the Division of Environmental Health.

(5) "Enforcement action" means the procedures contained in Section 26-14d-305 to enforce orders, rules, and agreements authorized by this chapter.

(6) (a) "Facility" means:

(i) any building, structure, installation, equipment, pipe, or pipeline, including any pipe into a sewer or publicly owned treatment works, well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft; or

(ii) any site or area where a hazardous material or substance has been deposited, stored, disposed of, or placed, or otherwise come to be located.

(b) "Facility" does not mean any consumer product in consumer use or any vessel.

(7) "Fund" means the Hazardous Substances Mitigation Fund created by

Section 26-14d-301.

(8) "Hazardous materials" means hazardous waste as defined in the Utah Hazardous Waste Management Regulations, PCBs, dioxin, asbestos, or a substance regulated under 42 U.S.C., Section 6991(2).

(9) "Hazardous substances" means the definition of hazardous substances contained in CERCLA.

(10) "Hazardous substances priority list" means a list of facilities meeting the criteria established by Section 26-14d-501 that may be addressed under the authority of this chapter.

(11) "National Contingency Plan" means the National Oil and Hazardous Substance Contingency plan established by CERCLA.

(12) "National Priority List" means the list established by CERCLA.

(13) "National priority list site" means a site in Utah that is listed on the National Priority List.

(14) "Proposed national priority list site" means a site in Utah that has been proposed by the Environmental Protection Agency for listing on the National Priority List.

(15) (a) "Release" means an accidental or deliberate spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of substances into the environment that is not authorized under state or federal law, rule, or regulation.

(b) "Release" includes abandoning or discarding barrels, containers,

and other closed receptacles containing any hazardous material or substance, unless the discard or abandonment is authorized under state or federal law, rule, or regulation.

(16) "Remedial action" means action taken consistent with the substantive requirements of CERCLA according to the procedures established by this chapter to prevent, eliminate, minimize, mitigate, or clean up the release of a hazardous substance from a facility on the hazardous substances priority list.

(17) "Remedial action plan" means a plan for remedial action consistent with the substantive requirements of CERCLA and approved by the director.

(18) "Remedial investigation" means a remedial investigation and feasibility study as defined in the National Contingency Plan established by CERCLA.

(19) (a) "Responsible party" means:

(i) the owner or operator of a facility;

(ii) any person who, at the time any hazardous substance was disposed of at the facility, owned or operated the facility;

(iii) any person who arranged for disposal or treatment, or arranged with a transporter for transport, for disposal, or treatment of hazardous materials or substances owned or possessed by the person, at any facility owned or operated by another person and containing the hazardous materials or substances; or

(iv) any person who accepts or accepted any hazardous materials or substances for transport to a facility selected by that person from which there is a release that causes the incurrence of response costs.

(b) For hazardous materials or substances that were delivered by a common or contract carrier to any facility, "responsible party" does not include the common or contract carrier, and the common or contract carrier may not be considered to have caused or contributed to any release at the facility that results from circumstances or conditions beyond its control.

(20) "Scored site" means a facility in Utah that meets the requirements of scoring established by the National Contingency Plan for placement on the National Priority List.

Section 3. Section 26-14d-201, Utah Code Annotated 1953, is enacted to read:

26-14d-201. The director may regulate hazardous substances releases by making rules, consistent with the substantive requirements of CERCLA, to:

(1) establish the requirements for remedial investigation studies and remedial action plans; and

(2) govern the confidentiality of records and data.

Section 4. Section 26-14d-202, Utah Code Annotated 1953, is enacted to read:

26-14d-202. The director may:

(1) advise, consult, and cooperate with other agencies of the state, the federal government, other states and interstate agencies, affected groups, political subdivisions, and industries in carrying out the purposes of this chapter;

(2) consistent with Chapter 19, Title 67, the Personnel Management Act, employ employees necessary to meet the requirements of this chapter;

(3) authorize any employee or representative of the division to conduct inspections as permitted in this chapter;

(4) encourage, participate in, or conduct any studies, investigations, research, and demonstrations relating to hazardous materials or substances releases necessary to meet the requirements of this chapter;

(5) collect and disseminate information about hazardous materials or substances releases;

(6) enforce rules by issuing orders; and

(7) review plans, specifications, or other data relating to hazardous substances releases as provided in this chapter.

Section 5. Section 26-14d-203, Utah Code Annotated 1953, is enacted to read:

26-14d-203. (1) Upon presentation of appropriate credentials and at any reasonable time, any authorized officer, employee, or representative of the division may:

(a) enter and inspect any property, premises, or place where he has

reason to believe there is a hazardous materials or substances release:

(b) copy any records relating to those hazardous materials or substances to determine compliance with this chapter and the rules made under authority of this chapter: and

(c) inspect and take samples of any suspected hazardous material or substance.

(2) If the division's representative takes samples of any suspected hazardous material or substance under authority of this section, he shall:

(a) give a receipt describing the sample taken to the owner, operator, or agent who has control of the suspected hazardous material or substance:

(b) if requested and if possible, give the owner, operator, or agent a split sample of the suspected hazardous material or substance equal in volume or weight to the portion he retains: and

(c) if an analysis of any sample is made, upon request, promptly furnish a copy of the results of the analysis to the owner, operator, or agent.

Section 6. Section 26-14d-204, Utah Code Annotated 1953, is enacted to read:

26-14d-204. The director shall make records, reports, or information obtained from any person, or created by the division in the course of performing activities under this chapter, available to the

public unless they are exempt from disclosure or entitled to confidential treatment or trade secret protection under Subsection 26-14-9.5 (1) or (4).

Section 7. Section 26-14d-205, Utah Code Annotated 1953, is enacted to read:

26-14d-205. (1) Any person who violates any final order or rule issued or adopted under this chapter is subject in a civil proceeding to a penalty of not more than $10,000 per day for each day of violation.

(2) Any person who violates the terms of any agreement made under authority of this chapter is subject in a civil proceeding to pay:

(a) any penalties stipulated in the agreement; or

(b) if no penalties are stipulated in the agreement, a penalty of not more than $10,000 per day for each day of violation.

(3) The director shall deposit all civil penalties collected under the authority of this section into the fund.

(4) (a) The director may enforce any orders issued under authority of this chapter by bringing a suit to enforce the order in the district court in Salt Lake County or in the district court in the county where the hazardous substances release occurred.

(b) After a remedial investigation has been completed, the director may bring a suit in district court against all responsible parties, asking the court for injunctive relief and to apportion liability among the responsible parties for performance of remedial action.

Section 8. Section 26-14d-206, Utah Code Annotated 1953, is enacted to read:

26-14d-206. (1) The director and the division shall comply with the procedures and requirements of Chapter 46b, Title 63, the Administrative Procedures Act, in all adjudicative proceedings conducted under the authority of this chapter.

(2) All orders and determinations under this chapter shall be considered adjudicative proceedings.

Section 9. Section 26-14d-301, Utah Code Annotated 1953, is enacted to read:

26-14d-301. (1) There is created an expendable trust fund entitled the Hazardous Substances Mitigation Fund.

(2) The fund shall consist of monies generated from the following revenue sources:

(a) any voluntary contributions received for the cleanup of hazardous substances facilities;

(b) civil penalties assessed under the authority of this chapter;

(c) appropriations made to the fund by the Legislature; and

(d) monies received by the state under Section 26-14d-402 and Section 26-14d-603.

(3) (a) The fund shall earn interest.

(b) All interest earned on fund monies shall be deposited into the fund.

(4) The director may use fund monies to:

(a) take emergency action as provided in Part 4;

(b) conduct remedial investigations as provided in Part 5;

(c) pay the amount required by the federal government as the state's portion of the cost of cleanups under authority of CERCLA, as appropriated by the Legislature for that purpose; and

(d) pay the amount required by the federal government as the state's portion of the cost of cleanups under 42 U.S.C. 6991 et seq., the Leaking Underground Storage Tank Trust Fund, as appropriated by the Legislature for that purpose.

Section 10. Section 26-14d-302, Utah Code Annotated 1953, is enacted to read:

26-14d-302. The director may not use fund monies to pay for:

(1) property damage or bodily injury resulting from a hazardous material or substance release; or

(2) property damage or bodily injury resulting from remedial studies or abatement action taken to address a hazardous material or substance release.

Section 11. Section 26-14d-401, Utah Code Annotated 1953, is enacted to read:

26-14d-401. (1) (a) Notwithstanding any other provision of this chapter, if the director has reason to believe that any hazardous materials release that occurred after March 18, 1985, is presenting a

direct and immediate threat to public health or the environment, the director may:

(i) issue an order requiring the owner or operator of the facility to take abatement action within the time specified in the order; or

(ii) bring suit on behalf of the state in the district court to require the owner or operator to take immediate abatement action.

(b) If the director determines that the owner or operator cannot be located or is unwilling or unable to take abatement action, the director may:

(i) reach an agreement with one or more potentially responsible parties to take abatement action; or

(ii) use fund monies to investigate the release and take abatement action.

(2) The director may use monies from the fund created in Section 26-14d-301 for abatement action even if an adjudicative proceeding or judicial review challenging an order or a decision to take abatement action is pending.

Section 12. Section 26-14d-402, Utah Code Annotated 1953, is enacted to read:

26-14d-402. (1) The director may recover costs of any investigation and abatement performed under this part from responsible parties.

(2) (a) In apportioning responsibility for the investigation and

abatement, or liability for the costs of the investigation and abatement, in any administrative proceeding or judicial action, the following standards apply:

(i) liability shall be apportioned among responsible parties in proportion to their respective contributions to the release; and

(ii) the apportionment of liability shall be based on equitable factors, including the quantity, mobility, persistence, and toxicity of hazardous materials contributed by a responsible party, and the comparative behavior of a responsible party in contributing to the release, relative to other responsible parties.

(b) (i) The burden of proving proportionate contribution shall be borne by each responsible party.

(ii) If a responsible party does not prove his proportionate contribution, the court or the director shall apportion liability to the party based on available evidence and the standards of Subsection (a).

(c) The court may not impose joint and several liability.

(d) Each responsible party is strictly liable for his share of investigation and abatement costs.

(3) The failure of the director to name all responsible parties is not a defense to an action under this section.

(4) (a) Any party who incurs costs under this part in excess of his liability may seek contribution from any other party who is or may be liable under this part for the excess costs in the district court.

(b) In resolving claims made under Subsection (a), the court shall allocate costs using the standards set forth in Subsection (2).

(5) (a) A party who has resolved his liability in an agreement under this part is not liable for claims for contribution regarding matters addressed in the settlement.

(b) (i) An agreement does not discharge any of the liability of responsible parties who are not parties to the agreement, unless the terms of the agreement provide otherwise.

(ii) An agreement made under this subsection reduces the potential liability of other responsible parties by the amount of the agreement.

(6) (a) If the director obtains less than complete relief from a party who has resolved his liability in an agreement under this part, the director may bring an action against any party who has not resolved his liability in an agreement.

(b) In apportioning liability, the standards of Subsection (2) apply.

(c) A party who resolved his liability for some or all of the costs in an agreement under this part may seek contribution from any person who is not party to an agreement under this part.

(7) (a) An agreement made under this part may provide that the director will pay for costs of actions that the parties have agreed to perform, but which the director has agreed to finance, under the agreement.

(b) If the director makes payments from the fund, he may recover the amount paid using the authority of this part or any other applicable authority.

Section 13. Section 26-14d-501, Utah Code Annotated 1953, is enacted to read:

26-14d-501. (1) The director shall develop and, as frequently as is necessary revise, a hazardous substances priority list by making a rule that:

(a) identifies separately national priority list sites, proposed national priority list sites, and scored sites that pose a significant threat to the public health or the environment; and

(b) declares those sites to be eligible to be addressed under the authority granted by this chapter.

(2) The director may not spend fund monies or use the authority granted by this chapter to address any facilities containing hazardous substances that are not on the hazardous substances priority list.

(3) The director shall remove facilities from the hazardous substances priority list when appropriate.

Section 14. Section 26-14d-502, Utah Code Annotated 1953, is enacted to read:

26-14d-502. Before undertaking any remedial investigations on a facility on the hazardous substances priority list, the director shall make reasonable attempts to:

(1) identify potentially responsible parties for each facility; and

(2) send written notice to each potentially responsible party informing him of his potential responsibility.

Section 15. Section 26-14d-503, Utah Code Annotated 1953, is enacted to read:

26-14d-503. The director may not spend fund monies or take action under authority of Parts 6 and 7 to address hazardous substances on any facility listed on the hazardous substances priority list if the facility can be cleaned up under any other state statute.

Section 16. Section 26-14d-601, Utah Code Annotated 1953, is enacted to read:

26-14d-601. (1) All remedial investigations conducted under the authority of this section shall:

(a) meet the substantive requirements of CERCLA;

(b) follow procedures established by the National Contingency Plan to avoid inconsistent state and federal action; and

(c) include recommendations for remedial action.

(2) (a) After determining that a hazardous substance release is occurring from a national priority list site or proposed national priority list site, and identifying responsible parties under Section 26-14d-502, the director shall make reasonable efforts to reach an agreement with the identified responsible parties to conduct a remedial investigation.

(b) The director may define in the agreement the scope of the remedial investigation, the form of the report, and the time limits for completion of the investigation.

(c) If any responsible party fails to perform as required under an agreement entered under the authority of this section, the director may take action to enforce the agreement.

(3) (a) If the director is unable to reach an agreement with one or more responsible parties to perform a remedial investigation, the director may issue an order directing one or more responsible parties to perform the remedial investigation.

(b) The director may define in the order the scope of the remedial investigation, the form of the report, and the time limits for completion of the remedial investigation.

(4) (a) If the director is unable to obtain an agreement with one or more responsible parties to perform a remedial investigation, chooses not to order any responsible party to perform the remedial investigation, or determines that the remedial investigation performed by a responsible party does not meet the substantive requirements of CERCLA, he may direct the division to conduct or correct the remedial investigation.

(b) The director may recover the costs incurred in conducting a remedial investigation from responsible parties according to the standards contained in Section 26-14d-603.

Section 17. Section 26-14d-602, Utah Code Annotated 1953, is enacted

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to read:

26-14d-502. (1) All remedial investigations conducted under the authority of this section shall:

(a) meet the substantive requirements of CERCLA; and

(b) include recommendations for remedial action.

(2) (a) After determining that a hazardous substance release is occurring from a scored site and identifying responsible parties under Section 26-14d-502, the director shall make reasonable efforts to reach an agreement with the identified responsible parties to perform a remedial investigation.

(b) The director may define in the agreement the scope of the investigation, the form of the report, and the time limits for completion of the investigation.

(c) If the potentially responsible parties fail to perform as required under an agreement entered under the authority of this section, the director may take action to enforce the agreement.

(3) (a) If the director is unable to reach an agreement with one or more responsible parties to perform a remedial investigation, or determines that the remedial investigation performed by responsible parties does not meet the substantive requirements of CERCLA, he may direct the division to conduct or correct the remedial investigation.

(b) The director may recover the costs incurred in conducting a remedial investigation from responsible parties according to the

standards contained in Section 26-14d-603.

Section 18. Section 26-14d-603, Utah Code Annotated 1953, is enacted to read:

26-14d-603. (1) The director may recover costs of any remedial investigation performed under Sections 26-14d-601 and 26-14d-602, from responsible parties.

(2) (a) In apportioning responsibility for the remedial investigation, or liability for the costs of the remedial investigation, in any administrative proceeding or judicial action, the following standards apply:

(i) Liability shall be apportioned among responsible parties in proportion to their respective contributions to the release.

(ii) The apportionment of liability shall be based on equitable factors, including the quantity, mobility, persistence, and toxicity of hazardous substances contributed by a responsible party, and the comparative behavior of a responsible party in contributing to the release, relative to other responsible parties.

(b) (i) The burden of proving proportionate contribution shall be borne by each responsible party.

(ii) If a responsible party does not prove his proportionate contribution, the court or the director shall apportion liability to the party based on available evidence and the standards of Subsection (a).

(c) The court may not impose joint and several liability.

(d) Each responsible party is strictly liable for his share of investigation costs.

(3) The failure of the director to name all responsible parties is not a defense to an action under this section.

(4) (a) Any party who incurs costs under this part in excess of his liability may seek contribution from any other party who is or may be liable under this part for the excess costs in district court.

(b) In resolving claims made under Subsection (a), the court shall allocate costs using the standards set forth in Subsection 26-14d-603 (2).

(5) (a) A party who has resolved his liability in an agreement under this part is not liable for claims for contribution regarding matters addressed in the settlement.

(b) (i) An agreement does not discharge any of the liability of responsible parties who are not parties to the agreement, unless the terms of the agreement provide otherwise.

(ii) An agreement made under this subsection reduces the potential liability of other responsible parties by the amount of the agreement.

(6) (a) If the director obtains less than complete relief from a party who has resolved his liability in an agreement under this part, the director may bring an action against any party who has not resolved his liability in an agreement.

(b) In apportioning liability, the standards of Subsection

26-14d-603 (2) apply.

(c) A party who resolved his liability for some or all of the costs in an agreement under this part may seek contribution from any person who is not party to an agreement under this part.

(7) (a) An agreement made under this part may provide that the director will pay for costs of actions that the parties have agreed to perform, but which the director has agreed to finance, under the agreement.

(b) If the director makes payments from the fund, he may recover the amount paid using the authority of this part or any other applicable authority.

Section 19. Section 26-14d-701, Utah Code Annotated 1953, is enacted to read:

26-14d-701. (1) Upon receipt of a remedial investigation report for a national priority list site, the director shall:

(a) review the report;

(b) provide a period for public comment;

(c) issue an order defining a remedial action plan consistent with CERCLA for the facility; and

(d) follow the procedures established by the National Contingency Plan to avoid inconsistent state and federal action.

(2) (a) To implement the remedial action plan, the director shall seek to reach an agreement with all responsible parties to perform the

remedial action.

(b) The director may define in the agreement the remedial action required and the time limits for completion of the remedial action.

(c) If the responsible parties fail to perform as required under an agreement entered under the authority of this section, the director may take action to enforce the agreement.

(3) (a) If the director is unable to reach an agreement with one or more responsible parties to perform remedial action, he may order all responsible parties to perform the remedial action.

(b) The director may define in the order the remedial action required and the time limits for completion of the remedial action.

Section 20. Section 26-14d-702, Utah Code Annotated 1953, is enacted to read:

26-14d-702. (1) (a) In apportioning responsibility for the remedial action in any administrative proceeding or judicial action under Sections 26-14d-701 and 26-14d-703, the following standards apply:

(i) Liability shall be apportioned among responsible parties in proportion to their respective contributions to the release.

(ii) The apportionment of liability shall be based on equitable factors, including the quantity, mobility, persistence, and toxicity of hazardous substances contributed by a responsible party, and the comparative behavior of a responsible party in contributing to the release, relative to other responsible parties.

(b) (i) The burden of proving proportionate contribution shall be borne by each responsible party.

(ii) If a responsible party does not prove his proportionate contribution, the court or the director shall apportion liability to the party based on available evidence and the standards of Subsection (a).

(c) The court may not impose joint and several liability.

(d) Each responsible party is strictly liable for his share of remedial action costs.

(2) The failure of the director to name all responsible parties is not a defense to an action under this section.

(3) (a) Any party who incurs costs under this part in excess of his liability may seek contribution from any other party who is or may be liable under this part for the excess costs in district court.

(b) In resolving claims made under Subsection (a), the court shall allocate costs using the standards set forth in Subsection (1).

(4) (a) A party who has resolved his liability in an agreement under this part is not liable for claims for contribution regarding matters addressed in the settlement.

(b) (i) An agreement does not discharge any of the liability of responsible parties who are not parties to the agreement, unless the terms of the agreement provide otherwise.

(ii) An agreement made under this subsection reduces the potential liability of other responsible parties by the amount of the agreement.

(5) (a) If the director obtains less than complete relief from a party who has resolved his liability in an agreement under this part, the director may bring an action against any party who has not resolved his liability in an agreement.

(b) In apportioning liability, the standards of Subsection (1) apply.

(c) A party who resolved his liability for some or all of the costs in an agreement under this part may seek contribution from any person who is not party to an agreement under this part.

(6) (a) An agreement made under this part may provide that the director will pay for costs of actions that the parties have agreed to perform, but which the director has agreed to finance, under the agreement.

(b) If the director makes payments, he may recover the amount using the authority of this part or any other applicable authority.

Section 21. Section 26-14d-703, Utah Code Annotated 1953, is enacted to read:

26-14d-703. (1) Upon receipt of a remedial action investigation report for a proposed national priority list site or a scored site, the director shall:

(a) review the report;

(b) provide a period for public comment; and

(c) issue an order defining the remedial action plan for the

facility.

(2) (a) To implement the remedial action plan, the director shall seek to reach an agreement with all responsible parties to perform the remedial action.

(b) In reaching an agreement for a proposed national priority list site, the director shall follow procedures established by the National Contingency Plan to avoid inconsistent state and federal action.

(c) The director may define in the agreement the remedial action required and the time limits for completion of the remedial action.

(d) If the responsible parties fail to perform as required under an agreement entered under the authority of this section, the director may take action to enforce the agreement.

Section 22. Section 26-14d-704, Utah Code Annotated 1953, is enacted to read:

26-14d-704. (1) A party who has entered an agreement or who has been issued a final order under the authority of this part shall send written notice to the director when the remedial action for the facility is completed.

(2) Upon notice that remedial action at a facility is complete, the director shall inspect the facility to determine if the remedial action plan as implemented meets the substantive requirements of CERCLA.

(3) If the director determines that the remedial action plan as implemented meets the substantive requirements of CERCLA, except for any

going activities at the facility, including operation, maintenance, or monitoring, he shall issue a notice of agency action declaring that remedial action at the facility is complete and removing the facility from the hazardous substances priority list.

(4) (a) If the director determines that the remedial action plan for a national priority list site, as implemented, does not meet the substantive requirements of CERCLA, he may issue an order directing the responsible parties to take additional actions to implement the remedial action plan.

(b) If the responsible parties refuse to comply with the order the director may take enforcement action.

(5) (a) If the director determines that the remedial action plan for a proposed national priority list site or a scored site has not been properly and completely implemented according to the agreement between the director and the responsible parties, or is not consistent with the substantive requirements of CERCLA, he shall request that the responsible parties take additional actions to fulfill the agreement to implement the remedial action plan.

(b) If the responsible parties refuse to comply with the request, the director may take action to enforce the agreement.

Section 23. Section 26-14d-801, Utah Code Annotated 1953, is enacted to read:

26-14d-801. (1) Except as provided in Subsection (2), nothing in

this chapter affects or modifies in any way the obligations or liability of any person under a contract or any other provision of this chapter or state or federal law, including common law, for damages, indemnification, injury, or loss associated with a hazardous material or substance release or a substantial threat of a hazardous material or substance release.

(2) In addition to the governmental immunity granted in Chapter 30, Title 63, the Utah Governmental Immunity Act, the state and its political subdivisions are not liable for actions performed under this chapter except as a result of intentional misconduct or gross negligence including reckless, willful, or wanton misconduct.

(3) Nothing in this chapter affects, limits, or modifies in any way the authority granted to the state, any state agency, or any political subdivision under other state or federal law.

Section 24. (1) There is appropriated from the General Fund for fiscal year 1988-1989 to the Hazardous Substances Mitigation Fund:

(a) $1,600,000 in matching funds to clean up the Sharon Steel site prioritized by the federal government on the National Priority List;

(b) $120,000 for the Underground Storage Tank program; and

(c) $1,280,000 for use by the Division of Environmental Health to fulfill their responsibilities under Chapter 14d, Title 26.

(2) All monies formerly contained in the nonlapsing dedicated credits account established by Section 26-14-20 are appropriated to the Hazardous Waste Mitigation Fund.

Section 25. Section 26-14-19, Utah Code Annotated 1953, as last amended by Chapters 161 and 217, Laws of Utah 1987, and Section 26-14-20, Utah Code Annotated 1953, as last amended by Chapter 113, Laws of Utah 1988, are repealed.

Section 26. This act takes effect on June 30, 1989.

Proposed Ground Water Quality Protection Regulations

PREAMBLE

Background

The proposed ground water quality protection regulations are the culmination of several years of effort in developing a more formalized program to protect the quality of ground water in Utah. A ground water policy was issued in 1984 by the Governor calling for the development of a state ground water quality protection strategy. The protection strategy was completed in 1986. In the public meetings that were held around the state in 1986 to receive comment on the strategy, those attending made it clear that it was very important that ground water be protected from contamination. Subsequently, the staff in the Bureau of Water Pollution Control prepared a concept paper on ground water aquifer classification and standards. This was discussed with various interest groups around the state in late 1987 and early 1988.

In the 1988 legislative session, the Utah legislature passed Senate Joint Resolution 1, expressing to Congress the request that any federal ground water legislation give primary responsibility to the states, and expressing the intent of the state to proceed with a ground water quality protection program. The regulation now being proposed includes the prior proposals on ground water classification and standards, and proposes a new permitting system to implement those standards. An earlier draft of the regulation has been subject to comment through public meetings and meetings with various interest groups. This proposed regulation and preamble reflects the comments that were received.

The ground water regulation is written to protect existing beneficial uses and quality of ground water, and to protect probable future beneficial uses based on water quality. Statutory authority for this regulation is contained in Chapter 26-11, Utah Code Annotated, which gives the Water Pollution Control Committee the responsibility to prevent, control, and abate pollution of waters of the state, including ground water.

Because it is difficult or impossible and in any event very costly to clean up a contaminated aquifer, and because it may take decades or longer for natural processes of dilution and purification to occur, it is generally recognized that prevention of contamination is far preferable to attempting to clean up contamination. For this reason, the focus of this regulation is on prevention, rather than clean up.

Ground water quality must be protected not just for the next ten or twenty years, but for future generations. This calls for a program to prevent ground water contamination to the greatest extent practical. The intent of this regulation is to establish a framework for overall protection of ground water quality. It is not intended to replace or duplicate existing regulatory programs which are providing protection of ground water adequately. For example, hazardous waste disposal regulatory programs, which are targeted primarily to protect ground water, will continue under the direction of the Bureau of Solid and Hazardous Wastes, and will not be replaced by this regulation.

A great deal of discussion has taken place concerning whether the state should have a policy of non-degradation or anti-degradation of ground water quality. This draft regulation is based on the concept of anti-degradation for the following reasons. Non-degradation means no degradation. While non-degradation may be an appropriate general goal, if this were applied literally, it would mean that no activities of a modern economy could take place, because almost every activity on the land surface can potentially affect the quality of ground water. Obviously this is not a practical approach. A number of states have non-degradation goals, but in actual practice function with an anti-degradation regulatory program. We feel that it is more realistic to adopt an antidegradation policy, recognizing that there will be some effect on ground water from man's activities, but minimizing those effects to acceptable levels. The draft regulation also uses a differential protection approach, providing a higher level of protection to higher quality ground water.

It is the intent of the Bureau of Water Pollution Control to work with local officials in providing data and other assistance, so they may have the information they need to make wise land use decisions to protect high quality aquifers. In areas with very high ground water quality, classified as pristine water, the protection levels to be applied are very stringent, and in effect it will require essentially no discharge of most pollutants from facilities located there. However, we do not intend to officially designate non-degradation areas, as this would essentially prohibit any kind of activity or development. These kinds of decisions are more properly dealt with at the local level through zoning and other land use planning authorities. Public water suppliers, through the wellhead protection program, also have a responsibility to take the necessary measures to protect their water sources in those wellhead protection areas.

In many places in the regulation, discretion is given to the Executive Secretary of the Water Pollution Control Committee to make various judgments and decisions. Some may feel that the Executive Secretary is given too much discretion as compared to the Committee itself. The Committee is the policy and rulemaking body for the water pollution control program in Utah. Most of the day-to-day operation of the water pollution control program is carried out by the Executive Secretary and Bureau staff as delegated by the Committee. However, the Committee retains ultimate authority, and any decision of the Executive Secretary can be reviewed, upon request, by the Committee. A formal hearing may also be requested before the Committee. Except for case-by-case decisions of a policy nature that may require Committee action, most day-to-day regulatory decisions are made by the Executive Secretary.

The draft regulation contains five major sections: 1) ground water quality standards which provide a baseline against which water quality can be compared; 2) a ground water classification system, based on the existing quality of ground water 3) ground water class protection levels, which specifies the ground water quality criteria which must be met in order to be in compliance with the regulation; 4) the ground water classification procedure; and 5) implementation, which specifies activities which require permits, the permitting process, and compliance requirements.

1. Ground Water Quality Standards.

   These standards are numerical criteria which are essentially equivalent to the Maximum Contaminant Levels (MCL's) established by the U.S. Environmental Protection Agency (EPA)for drinking water in the National Primary Drinking Water Regulations as authorized by the federal Safe Drinking Water Act. At the present time, only those constituents for which EPA has promulgated standards are included in this regulation. As EPA establishes additional standards, they will be reviewed and considered for adoption into this regulation.

This procedure of using EPA adopted criteria is followed because of the time and expense in developing standards. If is felt that these standards will protect the water for drinking and most other uses. If it becomes necessary to establish standards for other pollutants or other uses, the Water Pollution Control Committee will utilize the most current and scientifically valid information in establishing a numerical standard. The drinking water standards are not being applied directly to other beneficial uses, but are only used as reference levels. These standards are not intended to be the level to which ground water can be polluted, but are a baseline from which protection levels and numerical criteria will be developed which will be utilized in writing permits and determining compliance with the regulation.

2. Ground Water Classes

The ground water classification system is based on ground water quality. The classification in turn determines the protection level that applies to activities that may discharge to the ground water. It is felt that classification should be based on quality rather than existing use, because it is difficult to predict what use ground water in a particular area may be put to in the future. Where aquifers are classified, it will be based on available data. Until these aquifer classifications occur, however, ground water will be protected to the degree commensurate with current and potential future uses, based on the existing ground water quality. Most of the aquifers in the state will not be classified initially. This does not mean that these waters are unprotected. While an aquifer may not be classified, the ground water in a particular area will be protected through application of the protection levels commensurate with the ground water quality in that particular area. This approach will ensure against ground water being protected at a level less than its water quality would require.

Four major classes of ground water are defined in the regulation (Classes I through IV) and two special use subclasses, Class 1B and 1C. Class 1A, 1B and II waters are classified and protected as drinking water sources, except that Class 1A water, defined as pristine ground water, would have less than 500 mg/l total dissolved solids (TDS), and Class 1B ground water would be considered irreplaceable based on the cost of providing an alternative source of drinking water if the ground water were to become contaminated. Class II ground water includes water up to 3000 TDS. Some may feel that the range of TDS for Class II waters is too broad and provides unnecessary protection to a poor quality ground water. While at the present time water of 3000 mg/l TDS would not be suitable for drinking without expensive treatment or dilution with a better quality water, it is very possible in the future, due to improved technology, that such water may become a source of drinking water. Class III limited use ground water may have TDS levels up to 10,000 mg/l, but according to several federal laws is still considered a potential source of drinking water, therefore it is still protected from chemical contamination to a significant extent. Class III would also apply to any water where one or more of the MCL's are exceeded. In some cases, Class III water may be relatively high quality with just a single MCL exceeded. It may be practical to treat this water to remove the excessive contaminant thereby providing a high quality source of drinking water.

In a Class III area where the TDS may be near 10,000 mg/l, a 25% increase in TDS may result in exceeding the 10,000 mg/l limit. This would be allowed because it would not seem to be wise to discourage an activity from locating in a poor water quality area. Nevertheless, the ground water classification would continue to be Class III.

Aquifers having TDS greater than 10,000 mg/l are considered saline and would not be regulated under this regulation.

Class IC, ground water considered ecologically important, is intended to protect the quality of surfacing ground water that is necessary for the habitat of aquatic wildlife.

Because IC ground water must come to the surface before it would have an aquatic wildlife use, the surface water standards for the protection of aquatic wildlife (R448-2) would be applied in the surface water to protect these uses. Any discharge subject to a ground water discharge permit will have to be evaluated for its possible impact on surface water quality at the point where the ground water may come to the surface and on the beneficial uses of that surface water. Because criteria to protect aquatic wildlife are often more restrictive than those for drinking water, special attention must be paid to this use. Permit requirements will be developed on a case-by-case basis.

3. Ground Water Class Protection Levels

The protection levels are criteria which will be applied for activities which may result in a discharge to ground water, and are based generally on percentages of the standards for drinking water.

The concept of establishing protection levels is to provide a determinable methodology for identifying contamination while avoiding destruction of the water's beneficial use. By requiring notification before an MCL is approached, corrective action can be taken before the ground water quality has been degraded to the point that it is no longer suitable for its beneficial use. This approach may appear to some to be relatively stringent, but it is justified by the importance of protecting ground water, and can be supported using currently available technology. It is also an approach that has been successfully utilized in many other states in their ground water protection programs.

It is expected that potential dischargers would not look upon the protection levels as a target, but as a boundary to be avoided. Protective measures should be initiated once any increase in contaminant level is indicated. Reaching a protection level indicates a need for immediate action to present further contamination.

4. Ground Water Aquifer Classification

Classification of an aquifer will not be necessary before a ground water discharge permit can be written and issued. In an unclassified area, the entity requesting a permit will be expected to provide data on existing ground water quality in order for the appropriate ground water class to be determined. The permit will then be written based on the appropriate class protection level. Aquifers will be classified by the state as data are compiled.

Where data are available, entire aquifers or parts of aquifers can be formally classified, which will allow everyone to know up front the classification in a particular area.

Aquifers furnishing water to community public drinking water systems with ground water meeting Class 1A criteria will be classified as Class 1A within the well head protection area. Other ground water aquifers of the state will be unclassified. Aquifers will be appropriately classified as data become available.

5. Implementation

The ground water discharge permitting system provides a mechanism to implement the above standards and protection levels. This would be similar in some ways to the current discharge permit system for point source discharges to surface waters. Any person or entity proposing to construct or operate a new facility which could result in a release of contaminants to ground water would be required to apply for and obtain a permit before beginning that activity.

The intent is to require a permit for a facility or activity which, in the normal conduct of the activity or facility, may have a release to ground water. Such facilities as ponds and lagoons lined or unlined, mining operations and heap leach pads, ponds and piles, would be included. It is not the intent to require permits for above ground storage tanks, pipelines, process piping, etc., where a discharge would occur only if there were a break or a spill that would not normally be expected. Spills will not require a permit.

It is not intended that a separate ground water discharge permit would be required if a facility is also required to obtain a construction permit from the Water Pollution Control Committee, or a hazardous waste disposal permit from the Solid and Hazardous Wastes Committee. However, the substantive provisions of this regulation would have to be met before those permits are issued. For example, if a company requests a construction permit from the Committee for construction of a new wastewater disposal facility, the company would have to submit information as required by this regulation, and the requirements of this regulation would be incorporated into that construction permit.

The initial emphasis of the permitting program will be on new facilities. Existing facilities, would not be required immediately to apply for a permit, but would be required to notify the Executive Secretary of the Water Pollution Control Committee of the nature and location of their discharge so an inventory of potential sources of contamination could be developed. As staff resources are available or as problems are apparent, these existing sources will be required to apply for permits as they are so notified by the Executive Secretary.

The following table summarizes in a general way the protection levels:

Class	TDS	Other Contaminants	
		Not detectable	Detectable
1A	May not increase above 1.1 times background, but not more than 500 mg/l.	May not exceed 0.1 times standard, or the limit of detection, whichever is greater.	May not exceed 0.1 times standard, or 1.1 times background, whichever is greater.
1B	Same as above except TDS may not exceed 2,000 mg/l	Same as above	Same as above
II	May not increase over 1.25 times background, but in no case more than 3000 mg/l	May not exceed 0.25 times standard, or the limit of detection, whichever is greater.	May not exceed 0.25 times standard, or 1.25 times background whichever is greater.
III	May not increase above 1.25 times background.	May not exceed 0.5 times the standard, or the limit of detection, whichever is greater.	May not exceed 0.5 times standard, or 1.5 times background whichever is greater.

In no case can the standards be exceeded for Class I, II, or III, even if the background level is near the standard.

An upper limit of 2,000 mg/l TDS is applied to class 1B, irreplaceable ground water, as this is the current upper regulatory limit for drinking water.

Class IC (ecologically important ground water) standards will be established on a case-by-case basis, as needed. As discussed above, because 1C ground water must come to the surface before it would have an aquatic wildlife use, the surface water standards for the protection of aquatic wildlife (R488-2) would be applied in the surface water to protect these uses. Protection levels would also be established on a case-by-case basis.

Class IV ground water will be protected in accordance with existing regulations of the Underground Injection Control, Utah Pollutant Discharge Elimination System, and Utah Hazardous Waste Management programs.

In most cases the protection levels are low, and in a few cases below levels that can presently be detected by presently available laboratory equipment. Therefore, these standards can be considered as relatively stringent.

The intent of the protection levels is to minimize pollution discharged to ground water. New facilities will be required to apply best available technology to protect ground water, and in most cases designed to contain all pollutants and not allow a discharge.

A new facility is one for which construction or modification begins at least 180 days after the effective date of the regulation. Conversely, an existing facility or activity is defined as one which is in operation, or for which construction begins, within 180 days after the effective date of the regulation. This is to provide a period of time for facilities which are in the planning phase at the time the regulation is adopted to apply for and receive a ground water discharge permit.

For existing facilities which are notified in the future of the need to apply for and receive a ground water discharge permit, a period of time will be negotiated in which to prepare the information for the permit application. The permit conditions will be written on a case-by-case basis, and a schedule for compliance with permit conditions will be negotiated. It is anticipated that the facility will at least apply current technology that is commonly used in similar industries or activities in the country. As permits for existing facilities will probably only be required where there is an existing problem which needs to be addressed, there may be situations which ground water standards are already exceeded and cleanup may be required. In these cases, it is expected that ground water will be returned to background conditions, or to the MCL levels, unless alternate concentration limits are approved.

Exemptions

Because it is not practical to require permits for all activities which pose little or no threat to ground water quality, many activities will be exempt from the permitting requirements. Such activities or facilities would include, for example, clean water discharges, normal residential or agricultural irrigation, application of agricultural chemicals used in accordance with manufacturer's recommendations, septic tank and drainfield systems approved by the local or state health department, natural infiltration, land application, of livestock wastes, and hazardous waste management units permitted under the Utah Hazardous Waste Management Regulations, discharge from flood control systems, small mining operations, small feed lot and dairy operations, wells permitted under the Underground Injection Control permit program, produced water pits or reserve pits regulated by the Division of Oil, Gas, and Mining, storage tanks regulated by the Bureau of Solid and Hazardous Waste, and coal mining facilities regulated by the Division of Oil, Gas, and Mining.

These exempted facilities or activities are exempt only from the requirement to obtain a separate ground water discharge permit. They are not exempt from the prohibition against polluting ground water, and must not violate the levels of protection established in the regulation. The Executive Secretary can require a discharge permit for any facility or activity, exempt or not, if he determines it constitutes a threat to ground water quality.

Application for Permit

The application for a ground water discharge permit must include sufficient information to describe the extent and quality of the ground water, the quality of the discharge, how the discharge will be controlled so as to meet protection levels (including appropriate engineering plans and specifications), the proposed inspection and monitoring plans to ensure compliance with the permit conditions, and a contingency plan to bring the facility into compliance should there be a release of contaminants beyond that allowed in the permit. For existing facilities, there would have to be a plan to remedy violations of standards which may have resulted from discharges occurring prior to issuance of the ground water discharge permit.

The Executive Secretary may choose to publish a Notice of Intent to Approve, and provide 30 days for public comment, before issuing the permit, but this is not a requirement.

Alternate Concentration Limits

In very limited situations, the Water Pollution Control Committee may approve alternative concentration limits which may be less stringent than the standards or the protection levels. For new facilities this would be considered only in Class III ground water areas and where it is determined to be in the best interest of the State. For example, if it was found in a particular area that it was highly unlikely that the ground water could or would ever be put to beneficial use, and that the benefits would outweigh any cost or damages, then an alternate concentration limit could be approved if requested. However, this is expected to be a very rare situation. If it is felt that such a request has merit, at least one public hearing would be held in the area affected, and the approval must be given by the Water Pollution Control Committee in a scheduled meeting.

Permit Term

The ground water discharge permit would have a term of no more than 5 years, at which time the permit would be reviewed. This term would also apply to the ground water section of a construction permit. The permit will be automatically extended for another 5 year term if no changes are needed. If limited staff resources does not allow a full review of an expiring permit, it will be automatically extended. If a permit expires without official action to renew or extend a permit, the original permit will remain in effect until it is reviewed or extended.

Monitoring and Compliance

For a permitted facility, there will normally be points of compliance where monitoring wells will be located. These compliance monitoring points will be as close as practicable to the source of discharge to ground water. It will normally be the responsibility of the permittee to do monitoring at the monitoring wells to determine permit compliance. It is the intent of the State, within resource capabilities, to spot check by sampling monitoring wells on a random basis.

If monitoring at a facility reveals that the permit limits are being exceeded, it will be the responsibility of the owner to immediately take action to correct the violations and to take whatever corrective action may be necessary to clean up the ground water. Determination of compliance or non-compliance will be based on a statistical evaluation of the data available, as explained in the regulation.

When permit conditions are violated, the State has authority to take compliance actions, including the issuing of orders and the assessment of penalties. According to Section 26-11-13, Utah Code Annotated, penalties can be up to $10,000 per day of violation.

The question has arisen concerning violations of the standards or protection levels where there is no single identifiable source of contamination. This would be analogous to nonpoint source pollution in surface waters. We know that there may be some general degradation of ground water quality from general surface activity. It is not the intent of this regulation to attempt to regulate all such activities. However, if water quality monitoring shows that contamination is occurring in a particular area, that would be a trigger signaling the need to undertake studies to determine, the sources of contamination, and develop management programs to change activities to the extent feasible to minimize or eliminate the problem. This would be especially important in drinking water source recharge areas.

Fiscal Impact

Upon implementation there will be costs associated with an initial reporting requirement for facilities and/or activities discharging to ground water and subsequent costs for existing facilities and new facilities that pose a threat of contaminating ground water.

The ground water regulations are structured to prevent ground water contamination through control or elimination at the source. In this manner the entities responsible for the pollution bear the cost of its control or elimination. The responsible entity may either pass the costs on to their customers with a relatively small increase in the cost of their goods or services distributed over a large user base or absorb the cost.

If ground water contamination is not prevented, then even greater cost will occur due to use of alternative supplies of water, additional treatment of water prior to use or increased health costs because of exposure of the populace to contaminants. Each of these has serious drawbacks in shifting the cost and burden of responsibility to the public at large or to a public agency. This results in the ultimate costs being carried by the public and the taxpayers.

After-the-fact cleanup of ground water is very expensive and rarely very successful in restoring the ground water to prior beneficial uses. The cleanups are usually directed at containing the spread of contaminants present in the ground water. To determine the success of these efforts usually requires continued long-term monitoring of ground water quality.

The most significant benefit derived from the implementation of ground water protection regulations is the protection of human health and the environment. This includes the prevention of long-term illness and associated medical care costs and insurance premiums; increased productivity; and the reduction of human suffering. The environmental benefits include the protection of a valuable resource for the present and future generations for their use and enjoyment.

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R448-6 Ground Water Quality Protection

R448-6-1 Definitions

1.1 "Aquifer" means a geologic formation, group of geologic formations or part of a geologic formation that contains sufficiently saturated permeable material to yield useable quantities of water to wells and springs.

1.2 "Background Concentration" means the concentration of a pollutant in ground water upgradient from a facility, practice or activity, and which has not been affected by that facility, practice or activity.

1.3 "Best Available Technology" means the application of design, equipment, work practice, operation standard or combination thereof, at a facility to effect the maximum reduction of a pollutant achievable by available processes and methods taking into account energy, public health, environmental and economic impacts and other costs.

1.4 "Committee" means the Utah Water Pollution Control Committee.

1.5 "Community Drinking Water System" means a public drinking water system which serves at least fifteen service connections used by year-round residents or regularly serves at least twenty-five year-round residents.

1.6 "Comparable Quality (Source)" means a potential alternative source of water supply which has the same general quality as the source with the same types of contaminants and same relative concentrations.

1.7 "Comparable Quantity (Source)" means an alternative source capable of reliably supplying water in quantities sufficient to meet the year-round needs of the users served by the ground water source.

1.8 "Compliance Monitoring Point" means a well located where ground water is monitored to determine compliance with applicable ground water quality standards and protection levels.

1.9 "Contaminant" means any physical, chemical, biological or radiological substance or matter in water.

1.10 "Conventional Treatment" means normal and usual treatment of water for distribution in public drinking water supply systems including flocculation, sedimentation, filtration, disinfection and storage.

1.11 "Discharge" means the release of a pollutant directly or indirectly into subsurface waters of the state.

1.12 "Existing Facility" means a facility or activity that was in operation or under construction within 180 days after the effective date of this regulation.

1.13 "Economically Infeasible" means the cost to the typical water user for replacement water would exceed the community's ability to pay.

1.14 "Executive Secretary" means the Executive Secretary of the Utah Water Pollution Control Committee.

1.15 "Facility" means any building or contiguous group of buildings, or structures and any processing, handling or storage equipment or activity.

1.16 "Gradient" means the change in total water pressure head per unit of distance.

1.17 "Ground Water" means subsurface water in the zone of saturation including perched ground water.

1.18 "Ground Water Quality Standards" means numerical contaminant concentration limits adopted by the Committee for the protection of the subsurface waters of the State.

1.19 "Infiltration" means the movement of water through the pores of rock, soil or sediment.

1.20 "Institutional Constraints" means legal or other restrictions that preclude replacement water delivery and which cannot be alleviated through administrative procedures or market transactions.

1.21 "Limit of Detection" means the concentration of a chemical below which it can not be detected using currently accepted sampling and analytical techniques for drinking water as determined by the U.S. Environmental Protection Agency.

1.22 "New Facility" means a facility or activity for which construction or modification is initiated 180 days or more after the effective date of these regulations.

1.23 "Person" means any individual, corporation, partnership, association, company or body politic, including any agency or instrumentality of the United States Government.

1.24 "Point of Discharge" means the outermost location at which effluent or leachate has been stored, applied, disposed of, or discharged; for a diked facility, the outermost edge of the dikes.

1.25 "Pollutant" means dredged spoil, solid waste, incinerator residue, sewage, sewage sludge, garbage, munitions, trash, chemical waste, biological material, radioactive material, heat, wrecked or discarded equipment, rock, sand, or any industrial, municipal or agricultural waste discharged into waters of the state.

1.26 "Pollution" means such contamination, or other alteration of the physical, chemical, or biological properties of any waters of the State, or such discharge of any liquid, gaseous, or solid substance into any waters of the state as will create a nuisance or render such waters harmful or detrimental or injurious to public health, safety, or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life.

1.27 "Protection Level" means a percentage of a ground water quality standard or background concentration or a contaminant concentration limit based upon the ground water class used for establishing performance standards for a facility or activity that discharges or may discharge to ground water.

1.28 "Substantial Treatment" means treatment of water utilizing specialized treatment methods including ion exchange, reverse osmosis, electrodialysis and other methods needed to upgrade water quality to meet standards for public water systems.

1.29 "Total Dissolved Solids (TDS)" means the quantity of dissolved material in a sample of water which is determined by weighing the solid residue obtained by evaporating a measured volume of a filtered sample to dryness; or for many waters that contain more than 1000 mg/l, the sum of the chemical constituents.

1.30 "Radius of Influence" means the radial distance from the center of a well bore to the point where there is no lowering of the water table or potentiometric surface because of pumping of the well; the edge of the cone of depression.

1.31 "Upgradient" means a point located hydraulically above a facility such that the ground water at that point has not been impacted by the facility.

1.32 "Vadose Zone" means the zone of aeration including soil and capillary water. The zone is bound above by the land surface and below by the water table.

1.33 "Water Table" means the top of the saturated zone of a body of unconfined ground water at which the pressure is equal to that of the atmosphere.

1.34 "Water Table Aquifer" means an aquifer extending downward from the water table to the first confining bed.

1.35 "Waters of the State" means all streams, lakes, ponds, marshes, water courses, water ways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion thereof; except bodies of water confined to and retained within the limits of private property, and which do not develop into or constitute a nuisance or a public health hazard, or a menace to fish and wildlife, shall not be considered to be "waters of the state" under this definition.

1.36 "Wellhead Protection Area" means the surface and subsurface area surrounding a water well or wellfield supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or well field (Safe Drinking Water Act Amendments of 1986).

1.37 "Zone of Influence" means the area contained by the outer edge of the drawdown cone of a water well.

R448-6-2 Ground Water Quality Standards

The following Ground Water Quality Standards as listed in Table I are adopted for protection of ground water quality.

Table 1

Ground Water Quality Standards

Parameter	Miligrams per liter (mg/l) unless noted otherwise and based on analysis of filtered sample except for Mercury and organic compounds
Physical Characteristics	
Color (units)	15.0
Corrositivity (characteristic)	noncorrosive
Odor (threshold number)	3.0
pH (units)	6.5-8.5
Inorganic Chemicals	
Fluoride	2.4
Foaming agents	0.5
Nitrate (as N)	10.0
Metals	
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium	0.05
Copper	1.0
Lead	0.05
Mercury	0.002
Selenium	0.01
Silver	0.05
Zinc	5.0
Organic Chemicals	
Pesticides	
2, 4-D	0.1
Endrin	0.0002
Lindane	0.004
Methoxychlor	0.1
Toxaphene	0.005
2, 4, 5-TP Silvex	0.01
Volatile Organic Chemicals	
Trichloroethylene	0.005
Carbon tetrachloride	0.005
Vinyl chloride	0.002
1, 2 - Dichloroethane	0.005
Benzene	0.005

1, 1 - Dichloroethylene	0.007
1, 1, 1 - Trichloroethane	0.200
para - Dichlorobenzene	0.075

Other Organic Chemicals

Trihalomethanes	0.1

Radionuclides

The following are the maximum contaminant levels for Radium-226 and Radium-228, and gross alpha particle radioactivity:
Combined Radium-226 and Radium-228.....5pCi/l.
Gross alpha particle activity, including radium-226 but excluding Radon and Uranium 15.....pCi/l.
Beta particle and photon radioactivity from man-made radionuclides:
The average annual concentration of beta particle and photon radioactivity from man-made radionuclides shall not produce an annual dose equivalent to the total body or any internal organ greater than four millirem/year.
Except for the radionuclides listed in the table below, the concentration of man-made radionuclides causing four millirem total body or organ dose equivalents shall be calculated on the basis of a two liter per day drinking water intake using the 168 hour data listed in "Maximum Permissible Body Burden and Maximum Permissible Concentration Exposure", NBS Handbook 69 as amended August 1962, U.S. Department of Commerce. If two or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not exceed four millirem/year.

Average annual concentrations assumed to produce a total body or organ dose of four millirem/year.

Radionuclide	Critical Organ	pCi per liter
Tritium	Total Body	20,000
Strontium-90	Bone Marrow	8

R448-6-3 Ground Water Classes

3.1 GENERAL

The following ground water classes are established: Class IA - Pristine Ground Water; Class IB - Irreplaceable Ground Water; Class IC - Ecologically Important Ground Water; Class II - Drinking Water Quality Ground Water; Class III - Limited Use Ground Water; Class IV - Saline Ground Water and Unclassified.

3.2 CLASS IA - PRISTINE GROUND WATER

Class IA ground water has the following characteristics:
A. The ground water has total dissolved solids of less than 500 mg/l.
B. The ground water does not have concentrations of any contaminants that exceed the ground water quality standards listed in Table 1.

3.3 CLASS IB - IRREPLACEABLE GROUND WATER

Class IB ground water has the following characteristics: ground water is a source of water for a community public drinking water system for which no reliable supply of comparable quality and quantity is available because of economic or institutional constraints.

3.4 CLASS IC - ECOLOGICALLY IMPORTANT GROUND WATER

Class IC ground water has the following characteristics: the Class 1C area is a source for ground water discharge important to the continued existence of wildlife habitat.

3.5 CLASS II - DRINKING WATER QUALITY GROUND WATER

Class II ground water has the following characteristics:
A. The ground water has total dissolved solids less than 3000 mg/l.

1. The applicant submits a petition for an alternate concentration limit showing the extent to which the discharge will exceed the ground water standards or applicable protection levels and demonstrates that:

a. the facility is to be located in an area of Class III ground water;

b. the discharge plan incorporates the use of best available technology;

c. the alternate concentration limit is justified based on substantial overriding social and economic benefits; and,

d. the discharge would pose no threat to human health and the environment.

2. The application has been forwarded to the Executive Secretary for review and recommendation; and

3. one or more public hearings have been held by the Committee in nearby communities to solicit comment.

C. The Executive Secretary shall issue a ground water discharge permit for an existing facility provided it is determined that:

1. the applicant demonstrates that the ground water quality standards and protection levels can be met or the Water Pollution Control Committee has approved an alternate concentration limit as described in section R448-6-6.4(D). If the applicant is discharging a contaminant for which no ground water quality standard is established, the Executive Secretary shall, on a case by case basis, establish in the permit a discharge limit for that contaminant necessary to protect the public health and the environment;

2. the monitoring plan, sampling and reporting requirements are adequate to determine compliance with applicable requirements;

3. the applicant utilizes treatment and discharge minimization technology commensurate with plant process design capability and similar or equivalent to that utilized by facilities that produce similar products or services with similar production process technology; and,

4. there is no current or anticipated impairment of present and future beneficial uses of the ground water.

D. The Water Pollution Control Committee may approve an alternate concentration limit for a pollutant in ground water at an existing facility if the applicant for a ground water discharge permit shows the extent the discharge exceeds the ground water standards and applicable protection levels and demonstrates that:

1. steps are being taken to correct the source of contamination. This shall include a program and timetable for completion;

2. the pollution poses no threat to human health and the environment; and

3. the alternate concentration limit is justified based on overriding social and economic benefits.

6.5 NOTICE OF INTENT TO APPROVE

If determined to be appropriate or necessary, by the Executive Secretary, a notice of intent to approve shall be published in a newspaper in the affected area. The notice of intent shall include a description of the project and any permit conditions and shall allow 30 days in which interested persons may comment. Final action will be taken by the Executive Secretary following the 30-day comment period.

6.6 PERMIT TERM

A. The permit term will run for 5 years from the date of issuance. Permits may be renewed for 5 year periods or extended for a period to be determined by the Executive Secretary but not to exceed 5 years.

B. In the event that new ground water quality standards are adopted by the Water Pollution Control Committee, permits may be reopened to extend the terms of the permit or contaminants covered by the new standards. Holder of a permit may apply for a variance under the conditions outlined in paragraph R448-6-6.4(D).

6.7 GROUND WATER DISCHARGE PERMIT RENEWAL

The owner and operator of a ground water discharge facility must apply for a renewal or extension for a ground water discharge permit at least 180 days prior to the expiration of the existing permit. If a permit expires before an application for renewal or extension is acted upon by the Executive Secretary, the permit will continue in effect until it is renewed, extended or denied.

6.8 TERMINATION OF A GROUND WATER DISCHARGE PERMIT BY THE EXECUTIVE SECRETARY

A ground water discharge permit approval may be terminated or a renewal denied by the Executive Secretary if one of the following applies:

A. noncompliance by the owner and operator with any condition of the approved permit where the owner or operator has failed to take appropriate action in a timely manner to remedy the permit violation;

B. the owner's and operator's failure in the application or during the permit approval process to disclose fully all relevant facts at any time;

C. a determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by plan modification or termination; or

D. a change in any condition that requires either a temporary or permanent reduction or elimination of any discharge controlled by the plan.

6.9 POINTS OF COMPLIANCE

A. The Executive Secretary may issue a ground water discharge permit that includes compliance monitoring points where ground water quality standards and class protection levels are to be met. The distance to the compliance monitoring points must be as close as practical to the point of discharge.

B. The Executive Secretary may adjust the location of the compliance monitoring point depending upon the hydrology, type of contaminants, and other factors that may affect the ground water quality. In no event shall the compliance monitoring point be beyond the property boundaries of the permitted facility, or be located within the radius of influence of any beneficial use water supply.

6.10 BACKGROUND WATER QUALITY DETERMINATION

A. Background water quality contaminant concentrations shall be determined and specified in the ground water discharge permit.

B. A monitoring plan to determine background water quality shall be submitted to the Executive Secretary for approval prior to data collection. Any existing information or data may be accepted by the Executive Secretary as adequate, provided it is demonstrated that the data properly determines background water quality. No less than 2 up-gradient wells are required for each potential discharge site.

C. Facilities submitting applications for ground water discharge permit approval after the effective date of these rules shall at a minimum collect four ground water samples from each applicable well over a six-month period with no two samples taken in the same month. The arithmetic mean plus one standard deviation of the sample data shall represent background water quality at the time of permit issuance.

D. Thereafter, background water quality contaminant concentrations shall be updated to reflect natural fluctuations in concentrations by including applicable up-gradient, on-site ground water monitoring data for the ground water quality permit monitoring report.

6.11 NOTICE OF COMMENCEMENT AND DISCONTINUANCE OF GROUND WATER DISCHARGE OPERATIONS

A. The owner and operator shall orally notify the Executive Secretary of the ground water discharge date immediately upon commencement of discharge and submit a written notice within 30 days.

B. The owner and operator shall orally notify the Executive Secretary of the date and reason of discontinuance of ground water discharge within 10 days and shall submit a written notice confirming the oral report within 30 days. If a discontinuance is due to a spill, leak, or other accidental release, the Executive Secretary must be notified immediately.

B. The ground water does not have concentrations of any contaminants that exceed ground water quality standards in Table 1.

3.6 CLASS III - LIMITED USE GROUND WATER

Class III ground water has one or both of the following characteristics:

A. the ground water has total dissolved solids greater than 3000 mg/l and less than 10,000 mg/l, or;

B. The ground water has contaminants that exceed the ground water quality standards listed in Table 1.

3.7 CLASS IV - SALINE GROUND WATER

Class IV ground water has the following characteristics:

A. The ground water has total dissolved solids greater than 10,000 mg/l.

B. The ground water may have contaminants that exceed the ground water quality standards listed in Table 1.

3.8 UNCLASSIFIED GROUND WATER

Unclassified designates ground water that has not been classified as Class I through Class IV. The quality of ground water will be protected to a degree commensurate with current and probable future uses as determined by the existing ground water quality in unclassified areas.

R448-6-4 Ground Water Class Protection Levels

4.1 GENERAL

A. The ground water class Protection Levels set ground water numerical criteria for the conduct of activities that discharge or may discharge to ground water. The class Protection Levels utilize site-specific ground water quality numerical values that are: a percentage of established ground water quality standards or background concentrations; or a limit on contaminant concentration.

B. For the physical characteristics and radionuclides listed in Table 1, the values listed are the protection levels for all ground water classes.

C. All persons constructing or installing facilities or conducting activities that discharge or may discharge to ground water must meet the ground water quality numerical criteria for the ground water that may be adversely affected by the discharge.

4.2 CLASS IA PROTECTION LEVELS

A. Class IA ground water will be protected to the maximum extent feasible from degradation due to activities that discharge or may discharge to ground water.

B. The following protection levels will apply:

1. Total dissolved solids may not increase above 1.1 times the background value.

2. In no case will the total dissolved solids increase above 500 mg/l.

3. When a contaminant is not present in a detectable amount as a background concentration, the concentration of the contaminant may not exceed 0.1 times the ground water quality standard value, or exceed the limit of detection whichever is greater.

4. When a contaminant is present in a detectable amount as a background concentration, the concentration of the contaminant may not exceed 1.1 times the background concentration or exceed 0.1 times the ground water quality standard whichever is greater.

5. In no case will the concentration of a contaminant be allowed to exceed the ground water quality standard.

4.3 CLASS IB PROTECTION LEVELS

A. Class IB ground water will be protected as an irreplaceable source of drinking water.

B. The following protection levels will apply:

1. Total dissolved solids may not increase above 1.1 times the background value and can not exceed 2000 mg/l.

2. When a contaminant is not present in a detectable amount as a background concentration, the concentration of the contaminant may not exceed 0.1 times the ground water quality standard, or the limit of detection whichever is greater.

3. When a contaminant is present in a detectable amount as a background concentration, the concentration of the contaminant may not exceed 1.1 times the background concentration or exceed 0.1 times the ground water quality standard whichever is greater.

4. In no case will the concentration of a contaminant be allowed to exceed the ground water quality standard.

4.4 CLASS IC PROTECTION LEVELS

Class IC ground water will be protected as a source of water for potentially affected wildlife habitat. Limits on increases of total dissolved solids and organic and inorganic chemical compounds will be determined on a case-by-case basis to meet appropriate surface water standards.

4.5 CLASS II PROTECTION LEVELS

A. Class II the ground water will be protected for use as drinking water or other similar beneficial use with conventional treatment prior to use.

B. The following protection level will apply:

1. Total dissolved solids may not increase above 1.25 times the background value.

2. In no case will the total dissolved solids increase above 3000 mg/l.

3. When a contaminant is not present in a detectable amount as a background concentration, the concentration of the contaminant may not exceed 0.25 times the ground water quality standards value, or exceed the limit of detection whichever is greater.

4. When a contaminant is present in a detectable amount as a background concentration, the concentration of the contaminant may not exceed 1.25 times the background concentration or exceed 0.25 times the ground water quality standard whichever is greater.

5. In no case will the concentration of a contaminant be allowed to exceed the ground water quality standard.

4.6 CLASS III PROTECTION LEVELS

A. Class III ground water will be protected as a potential source of drinking water, after substantial treatment, and as a source of water for industry and agriculture.

B. The following protection levels will apply:

1. Total dissolved solids may not increase above 1.25 times the background concentration level.

2. When a contaminant is not present in a detectable amount as a background concentration, the concentration of the contaminant may not exceed 0.5 times the ground water quality standard, or the limit of detection whichever is greater.

3. When a contaminant is present in a detectable amount as a background concentration, the concentration of the contaminant may not exceed 1.5 times the background concentration or exceed 0.5 times the ground water quality standard whichever is greater.

4. In no case will the concentration of a contaminant be allowed to exceed the ground water quality standard. If the background concentration exceeds the ground water quality standard no increase will be allowed.

4.7 CLASS IV PROTECTION LEVELS

Class IV ground water will be protected in accordance with existing regulations of the Underground Injection Control, Utah Pollutant Discharge Elimination System and Utah Hazardous Waste Management programs.

4.8 PROTECTION LEVELS FOR UNCLASSIFIED

The ground water protection levels for unclassified ground water areas will be determined by the existing ground water quality within a 2-mile radius of the facility or activity.

R448-6-5 Ground Water Classification for Aquifers

5.1 GENERAL

A. When sufficient information is available, entire aquifers may be classified by the Water Pollution Control Committee according to the quality of ground water contained therein and commensurate protection levels will be applied.

B. Ground water sources furnishing water to community public drinking water systems with ground water meeting Class IA criteria are classified as Class IA within the well head protection area.

5.2 CLASSIFICATION AND RECLASSIFICATION PROCEDURE

A. The Committee may initiate classification or reclassification.

B. Individuals, companies, cities, counties, state agencies, federal agencies and state regulated public water suppliers may petition the Committee for classification and reclassification.

C. Boundaries for class areas will be delineated so as to enclose distinct ground water classes as nearly as known facts permit. Boundaries will be based on hydrogeologic properties, existing ground water quality and for Class IB and IC, current use. Parts of an aquifer may be classified differently.

D. The petitioner requesting reclassification will provide sufficient information to determine if reclassification is in the best interest of the beneficial users.

E. The petition for classification and reclassification will include:

1. factual data supporting the change in classification;
2. a description of the proposed ground waters to be reclassified;
3. potential contamination sources;
4. ground water flow direction;
5. current beneficial uses of the ground water; and
6. location of all water wells in the area to be reclassified.

F. One or more public hearings will be held to receive comment on classification and reclassification proposals.

G. The Committee will determine the disposition of all petitions for classification and reclassification.

R448-6-6 Implementation

6.1 DUTY TO APPLY FOR A GROUND WATER DISCHARGE PERMIT

A. All persons who construct, modify, install, or operate any new facility, not exempt as specified in Section 6.2, which stores, discharges or would probably result in a discharge of pollutants that may move directly or indirectly into ground water, including, but not limited to land application of wastes; waste storage pits; waste storage piles; landfills and dumps; large feedlots; mining, milling and metalurgical operations, including heap leach facilities; and pits, ponds, and lagoons whether lined or not, must apply to the Executive Secretary of the Committee for an approved ground water discharge permit at least 180 days before any discharge. A ground water discharge permit must be obtained prior to commencement of construction and/or operation of the new facilities.

B. All persons who construct, modify, install, or operate any existing facility, including facilities under construction, not exempt as specified in Section 6.2, which stores, discharges or would probably result in a discharge of pollutants that may move directly or indirectly into ground water, including, but not limited to land application of wastes; waste storage pits; waste storage piles; landfills and dumps; large feedlots; and mining, milling metalurgical operations, including heap leach facilities; and pits, ponds, and lagoons whether lined or not, must submit a notification of the nature and location of the discharge to the Executive Secretary within 180 days following the effective date of these Regulations and must submit an application for a ground water discharge permit within one year after receipt of written notice from the Executive Secretary that a ground water discharge permit is required.

6.2 EXEMPTIONS FROM GROUND WATER DISCHARGE PERMIT

A. The following except under the provisions of section R448-6-6.2(B) do not require a ground water discharge permit under this section:

1. facilities with effluent or leachate which has been demonstrated to the satisfaction of the Executive Secretary to conform to the ground water quality standards and protection levels or do not contain any contaminant that may present a threat to human health, the environment or its potential beneficial uses. The Executive Secretary may require samples be analyzed for the presence of contaminants before the effluent or leachate discharges directly or indirectly into ground water.

If the discharge is by seepage through natural or altered natural materials, the Executive Secretary may require samples of the solution be analyzed for the presence of pollutants before or after seepage;

2. water used for watering of lawns, gardens, or shrubs or for irrigation for the revegetation of a disturbed land area except for the direct land application of wastewater;

3. application of agricultural chemicals including fertilizers, herbicides, insecticides fungicides, rodenticides and fumigants when used in accordance with current scientifically based manufacturer's recommendations for the crop, soil, and climate and in accordance with state and federal statutes, regulations, permits, and orders adopted to avoid ground water contamination;

4. water used for irrigated agriculture except for the direct land application of waste water from municipal, industrial or mining facilities;

5. discharge from flood control systems located in urbanized areas including detention basins, catch basins and wetland treatment facilities used for collecting or conveying storm water runoff;

6. natural ground water seeping or flowing into conventional mine workings which re-enters the ground by natural gravity flow prior to pumping or transporting out of the mine and without being used in any mining process;

7. leachate which results entirely from the direct natural infiltration of precipitation through undisturbed materials;

8. wells permitted under the underground injection control (UIC) program;

9. land application of livestock wastes, within expected crop nitrogen uptake;

10. individual subsurface wastewater disposal systems approved by local health departments or large subsurface wastewater disposal systems approved by the Committee;

11. produced water pits, built, operated, regulated and maintained under Sections R615-9-1 through R615-9-9 of the Oil and Gas Conservation General Rules of the Division of Oil, Gas, and Mining;

12. reserve pits regulated under Section R615-3-16 of the Oil and Gas Conservation General Rules by the Division of Oil, Gas, and Mining;

13. storage tanks installed or operated under regulations adopted by the Utah Solid and Hazardous Waste Committee;

14. coal mining facilities regulated under the Coal Mining and Reclamation Act by the Utah Division of Oil, Gas, and Mining;

15. hazardous waste management units permitted under the Utah Hazardous Waste Management Regulations;

16. facilities or portions of facilities with active ground water remediation programs conducted under the Resources Conservation and Recovery Act or Comprehensive Environmental Response, Compensation and Liability Act;

17. feedlots not in excess of the "criteria of number only" as specified in section R448-8-3.5(5)(a) for NPDES permits;

18. mining, or processing or milling facilities handling less than 10 tons per day of metallic and/or nonmetallic ore and waste rock;

19. pipelines and above-ground storage tanks; and,

20. facilities which the Executive Secretary determines after a review of the application will have a de minimus actual or potential effect on ground water quality.

6.12 PERIODIC SUBMISSION OF MONITORING REPORTS

Reports of results obtained pursuant to any monitoring requirements in the discharge permit and the methods used to obtain these results shall be periodically submitted to the Executive Secretary according to the schedule specified in the approved ground water discharge permit.

6.13 REPORTING OF MECHANICAL PROBLEMS OR DISCHARGE SYSTEM FAILURES

The operator of a ground water discharge facility shall immediately notify the Executive Secretary of any mechanical or discharge system failures. A written statement confirming the oral report shall be submitted to the Executive Secretary within 30 days.

6.14 CORRECTION OF ADVERSE EFFECTS REQUIRED

If monitoring or testing indicates that the permit conditions may be or are being violated by ground water discharge operations, the owner and operator of the discharge operations shall promptly make corrections to the system to cease violations of the discharge permit. The owner and operator may be required to take immediate corrective action to clean up the ground water.

6.15 DETERMINATION OF PROBABLE OUT-OF-COMPLIANCE STATUS

A. Determination of probable out-of-compliance status shall be based on the sample value for any one ground water contaminant that exceeds the permitted allowable limit, within the established laboratory quality assurance, in any one sample from the compliance monitoring point.

B. An accelerated schedule of monitoring is required upon determination of probable out-of-compliance status. The accelerated schedule requires monthly or other periodic sampling as determined by the Executive Secretary of the compliance monitoring point for the water contaminant for two months or until the facility is brought into compliance.

6.16 OUT-OF-COMPLIANCE STATUS

A. Out-of-compliance status shall be based upon two consecutive samples which exceed the permitted allowable limit by two standard deviations as calculated for the ground water contaminant at the compliance monitoring point or statistically higher concentrations in the compliance monitoring point over that of the permitted allowable limit. The statistical significance shall be determined using the statistical methods described in Statistical Methods for Evaluating Ground Water Monitoring Data from Hazardous Waste Facilities, vol. 53, No. 196 of the Federal Register, Oct. 11, 1988.

6.17 PROCEDURE WHEN A FACILITY IS OUT-OF-COMPLIANCE

A. If a facility is out of compliance the following is required:

1. The permittee or responsible party shall notify by telephone the Executive Secretary within 24 hours after detection, followed by a written notice within 5 days.

2. The permittee or responsible party shall institute an accelerated monitoring schedule requiring at least monthly sampling for two months and monthly sampling thereafter or on a sampling schedule determined by the Executive Secretary until the facility is brought into compliance.

3. The permittee or responsible party shall prepare and submit within 30 days to the Executive Secretary a plan and time schedule for assessment of the source, extent and potential dispersion of the contamination, and the evaluation of potential remedial action to restore and maintain ground water quality and insure that the ground water quality standards will not be exceeded at the compliance monitoring point.

4. The Executive Secretary may require immediate implementation of the contingency plan submitted with the original ground water discharge permit in order to regain and maintain compliance with the standards at the compliance monitoring point.

6.18 GROUND WATER DISCHARGE PERMIT TRANSFER

A. The owner and operator of a ground water discharge facility which is operating pursuant to an approved discharge permit shall give written notice to the Executive Secretary of intention to transfer the ground water discharge permit, by sale or other ownership transfer of the facility within 30 days of the change of ownership.

B. The notice shall include a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage and liability between them.

6.19 ENFORCEMENT

A. These regulations are subject to enforcement under Section 26-11-16 of the Utah Water Pollution Control Act.

6.20 HEARING AND APPEALS

A. Any person who:

1. is denied an exemption by the Executive Secretary under paragraphs 1 and 20, of exemptions from ground water discharge permit;

2. objects to a discharge limit established by the Executive Secretary;

3. objects to conditions or limitations proposed or established by the Executive Secretary in the discharge permit; or

4. objects to monitoring, sampling, information, or other requests or requirements made by the Executive Secretary;

may request a hearing before the Committee for review of that issue or decision.

B. Any person who is denied a permit or whose permit is proposed to be terminated or revoked by the Executive Secretary may appeal that decision to the Executive Director of the Department of Health pursuant to Section 26-11-13(2).

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B. The submission of an application for a ground water discharge permit may be required for any exempted discharge if it is determined that the discharge may be causing or is likely to cause violations of the ground water quality standards or protection levels.

6.3 APPLICATION REQUIREMENTS FOR A GROUND WATER DISCHARGE PERMIT APPROVAL

A. Unless otherwise determined by the Executive Secretary, the application for approval of a permit to discharge wastes or pollutants to ground water shall include, but is not limited to, the following complete information:

1. the name and address of the owner and operator of the project and the name and address of the operator if different than the owner. A corporate application must be signed by the officers of the corporation. The name and address of the contact, if different than above, and telephone numbers for all listed names shall be included;

2. the legal location of the facility by county, quarter-quarter section, township, and range;

3. the name of the project or facility and the type of operation, facility, or development, including the expected project life;

4. a plat map showing all wells, water bodies, drainages, natural or man-made structures and water usage within a one-mile radius of the discharge. The plat map must show the location and depth of existing or proposed wells to be used for monitoring ground water quality;

5. geologic, hydrologic, and agricultural description of the area of review, including topography, soil types, aquifers, ground water flow direction, ground water quality, aquifer material, and well logs. The hydrologic description must include a projected area of influence;

6. the type, source, and chemical, physical, radiological, and toxic characteristics of the effluent or leachate to be discharged; the average and maximum daily amount of effluent of leachate discharged (gpd), the discharge rate (gpm), and the expected concentrations of any contaminant (mg/l) listed in the ground water quality standards in each discharge or combination of discharges. If more than one discharge point is used, information for each point must be given individually;

7. information which shows that the discharge can be controlled and will not migrate into or adversely affect the quality of any other waters of the state, including the applicable surface water quality standards, that the discharge is compatible with the receiving ground water, and that the discharge will comply with the ground water quality standards and class protection level;

8. for areas where the ground water has not been classified by the Committee, information on the quality of the receiving ground water sufficient to determine the applicable protection levels;

9. a proposed monitoring plan, which includes a description, where appropriate, of the following:

a. ground water monitoring to, at a minimum, determine ground water flow direction and gradient, background quality at the site, and the quality of ground water at the compliance monitoring point;

b. the installation, use and maintenance of monitoring devices;

c. the description of the compliance monitoring area defined by the compliance monitoring points including the dimensions and hydrologic and geologic data used to determine the dimensions;

d. monitoring of the vadose zone;

e. measures to prevent ground water contamination after the cessation of operation, including post-operational monitoring;

f. monitoring well construction and ground water sampling which conform to A Guide to the Selection of Materials for Monitoring Well Construction and Ground Water Sampling, (1983) and RCRA Ground Water Monitoring Technical Enforcement Guidance Manual (1986), unless otherwise specified by the Executive Secretary;

g. description and justification of parameters to be monitored.

10. the plans and specifications relating to construction, modification, and operation of discharge systems;

11. a description of the ground water most likely to be affected by the discharge, including water quality information of the receiving ground water prior to discharge, a description of the aquifer in which the ground water occurs, the depth to the ground water, the saturated thickness, flow direction, porosity, hydraulic conductivity, and flow systems characteristics;

12. a distance to the nearest well, the use and the water quality of that well, and a listing of all water wells within a 2-mile radius of the area of review and the status of each;

13. a compliance sampling plan which includes provisions for sampling of effluent and for flow monitoring, to determine the volume and chemistry of the discharge onto or below the surface of the ground and a plan for sampling monitoring wells and appropriate nearby water wells including the parameters to be sampled. Sampling and analytical methods must conform with the following references and analysis performed by certified laboratories unless otherwise specified by the Executive Secretary:

a. Standard Methods for the Examination of Water and Wastewater, sixteenth edition, 1985;

b. E.P.A. Methods,Methods for Chemical Analysis of Water and Wastes, 1983;

c. Techniques of Water Resource Investigation of the U.S. Geological Survey, (1982);

d. Federal Register, latest methods published for monitoring pursuant to 40 CFR parts 141 and 142, 1975-1987, Primary Drinking Water Regulations and 40 CFR parts 264 and 270, including Appendix IX, July 9, 1987;

e. National Handbook of Recommended Methods for Water-Data Acquisition, GSA-GS edition;

f. Manual of Analytical Methods for the Analysis of Pesticide in Humans and Environmental Samples, 1980;

14. a description of the flooding potential of the discharge site, including the 100-year flood plan, and any applicable flood protection measures;

15. a contingency plan for bringing the facility into compliance if permitted allowable limits are exceeded;

16. the methods and procedures for inspections of the facility operations and for detecting failure of the system; and,

17. for any existing source, a corrective action plan or identification of other response measures to be taken to remedy any violation of ground water quality standards which has resulted from discharges occurring prior to issuance of a ground water discharge permit.

6.4 ISSUANCE OF DISCHARGE PERMIT

A. The Executive Secretary shall issue a ground water discharge permit for a new facility provided it is determined that:

1. The applicant demonstrates that the ground water quality standards and protection levels will be met or the Water Pollution Control Committee has approved an alternate concentration limit as described in section R448-6-6.4(B). If the applicant requests approval to discharge a contaminant for which no ground water quality standard is established, the Executive Secretary shall, on a case by case basis, establish in the permit a discharge limit for that contaminant necessary to protect the public health and the environment;

2. the monitoring plan, sampling and reporting requirements are adequate to determine compliance with applicable requirements;

3. the applicant is using best available treatment and methods to minimize any discharge of a contaminant; and,

4. there is no impairment of present and future beneficial uses of the ground water.

B. The Water Pollution Control Committee may approve an alternate concentration limit for a new facility if: